From Science to Morality: A Polanyian Perspective on the Letter and Spirit of the Law

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ABSTRACT Key Words: Polanyi, Aristotle, post-critical epistemology, meta-ethics, emergence, phronesis, deontology, virtue ethics, indwelling, traditions.
Looking at the moral law from Polanyi's post-critical epistemology and emergent ontology reveals two interconnected roles for the letter of the law and two ways in which it can oppose the spirit of the law. For the moral student the law is a procedural method, for the moral virtuoso the law is an incomplete explicit expression of a tacit way of being. The two are connected in that procedural rules and practices set the basis for understanding and experiencing an emergent reality. This reality is embodied in the exemplars of a moral tradition and expressed in its principles and maxims.

Polanyi's analysis of knowing as a skill that is dependent on tacit knowledge, his appreciation of the heuristic nature of the question and the emergence of an answer in a discovery, and his understanding of the intentional from-to structure of experience, all apply to moral knowledge as well as scientific knowledge. It is my conviction that the epistemological and ontological framework that Polanyi begins to develop is capable of unifying Aristotelian, Kantian, utilitarian, sentiment-based, intuitionist and religious ethics in a vibrant, forward-focused synthesis.

In this article, I will begin to excavate that framework and show how it can be applied by using Polanyi's philosophy to address a puzzle in moral philosophy: the tension between following the letter of the law and following the spirit of the law.[1] The Kantian notion that the moral law should be followed regardless of consequences, and the utilitarian notion that the laws should be made and even bent to advance a goal, reflect a tension that moral agents sometimes feel between following the letter of the law and following its spirit. Showing how Polanyi's philosophy addresses this tension reveals that the good person achieves a way of being that answers questions inherent in the human condition. It shows how following moral maxims and principles can both be a method to transform oneself into that way of being and provide knowledge of reality. It also sets the theoretical groundwork for understanding how one can dwell in various moral principles or even transcend them.

I. The Ethical Life as a Skilled Way of Being

Polanyi's analysis of knowing as a skill that is deeply funded by tacit knowledge will help to solve the puzzle expressed in the notion of the spirit *versus* the letter of the law. Looking at how knowing works in the sciences and its similarity to how knowing works in the crafts, will show how moral knowledge is achieved and advanced in a Polanyian perspective. It will also bring out strong connections between a Polanyian moral philosophy and Aristotelian virtue ethics.[2]

1. Scientific and Craft Knowing

For Polanyi, "all knowledge is *either tacit* or *rooted in tacit knowledge*" (*KB*, 144). Even the theoretically explicit knowledge of science is the focal blossom of a fund of tacit experience and knowledge that is working

subsidiarily as its ground. In *Personal Knowledge*, Polanyi shows that scientific knowledge is the product of a craft, supported by a community of participants who share experience and skills and who are thus able to competently make valid judgments.

In order to properly develop and exercise the skills of a craft, one must learn its tacit as well as explicit knowledge. An important element in the education of the scientist is thus the impartation of tacit knowledge through guided participation in the activities of the craft. Polanyi's epistemology thus brings out the importance of a novice-expert, or apprentice-master, relationship in gaining scientific knowledge.

In order to become a scientist—or in order to become a glassmaker, a shipwright or a house builder—the model for passing on knowledge is one of apprenticeship. One listens to the instructions of the expert craftsman, one observes and imitates, and one practices performing the skills of the craft. Learning involves both explicit instruction and hands on experience. Only after a period of apprenticeship does one know how to apply the rules/laws correctly in new situations and develop the sensibility to recognize the value of new achievements. There are textbooks and trade manuals, but one needs experience with the equipment and procedures before one is qualified to produce scientific knowledge and make responsible judgments in a particular field. Polanyi thus discusses the importance of hours of laboratory training as one of the means by which the tacit knowledge of the scientist, and the knowledge embedded in the community's shared practices, are passed on to a new generation (*KB*, 106-107; *PK*, 53). One must collect certain experiences under the guidance of an expert in order to come to understand the significance of a particular procedural rule or scientific law or experimental result, and to weigh its strengths and possible implications.

In the process of learning, the novice inevitably misunderstands the instructions and rules given by the master, because he lacks the tacit knowledge of the master. As the novice makes mistakes and receives corrections, he is better able to understand and apply rules. Through repeated performances, the apprentice acquires the tacit background knowledge that gives him a new understanding of the explicit dialogue engaged in by the community's experts.

The novice achieves competence and then moves on to achieve the excellence of an expert. At each stage of instruction, the rules may play a different role. The novice may follow rules blindly to correct particular behaviors and achieve the right sort of practice, but the expert comes to see the rules as explicit renditions of knowledge that best works tacitly. A trade may have its secrets, but Polanyi shows that the expert is not necessarily withholding knowledge intentionally from the apprentice; certain aspects of a craft cannot be formalized and even the best, explicit renditions of techniques can be misunderstood. If an explicit statement of knowledge is withheld, it may not be that the community of experts is exercising political cunning to consolidate its power. The reason might be that the uninitiated do not yet have the tacit coefficients necessary to properly understand the statement. The novice is likely to misunderstand such a statement in a way that hinders rather than helps his understanding of the craft.[3]

As Polanyi says, "[A]ny rules laid down for carrying out empirical inferences must be highly ambiguous" (*PK*, 370). Here Polanyi recognizes what Wittgenstein also recognized in his discussions on rule-following. If one does not have the right sort of experiential background and training, a rule can always be misapplied, and an explicit sign can *always* be taken the wrong way.[4]

Skills are built through a dialectic of performance and analysis. A performance is an act of synthetic

integration that relies on subsidiary operations and clues. But performance can be improved when it is analyzed into parts and processes. A particular part can be made explicit and trained separately before it is integrated back into synthetic performance. For instance, a pianist might practice a particular chord, or a boxer might practice a particular punch. In the dialectical progression of performance and analysis, the rules usually emerge as an artifice of the analysis and show a caricature of the actual integration at best. The rules are also not part of the focal awareness of the master craftsmen when they are engaged in full performance. The expert pianist or boxer performs without attention to the rules, but focuses ahead to the general result desired. Rules at this level are part of an explicit rendition of how we get to where we are going. In order for the subsidiary skills or clues to function as they should in synthetic performance, the rules must, in a sense, be forgotten. Playing the piano or boxing with a focus on the rules might be a technically precise failure rather than a beautiful accomplishment.

For Polanyi, since so much of the training in a field is embedded in practices and communicated tacitly, we must trust the judgment of the expert. The seasoned scientist has the tacit background to understand scientific laws and can use their knowledge subsidiarily in the service of discovery. The seasoned doctor, for example, has the experience to tell the difference between a real epileptic seizure and a hystero-epileptic seizure (*KB*, 123). A novice following his rulebook might mistake the episode and do the wrong thing, such as prescribe a wrong treatment.

"Rules of an art can be useful," says Polanyi, "but they do not determine the practice of an art" (*PK*, 50). In practicing the skills of a craft, rules and principles have their primary value as learning tools, guideposts and reminders for novices and those reaching a level of basic compentence. To say, as Polanyi suggests, that rules or principles themselves are "dwelled in" or "interiorized" (*M*, 62; *KB*, 214) might even reify them a bit too much. Procedural rules are a way of articulating aspects of subsidiary awareness, but rules may also be entirely discarded. At the level of competence, the rules still may be heavily leaned upon, but once one has achieved expert status, rules may be violated in the service of the goals of the craft. In the craft of shipbuilding, for instance, the master's focus is on building a good ship, and if she attempts to build a ship better than one ever built before, her efforts might violate the existing rules of construction and design, but would still be in service of the trade's purpose. A true expert can be an innovator who breaks the customary rules of the craft to produce new and better results—and Polanyi would maintain that these results *should* be appreciated by those who achieve the expert's level of knowledge in the field ("CI," 264).

While crafts may focus on procedural rules for the production of a performance or artifact, sciences seem to move beyond procedure and performance to acquire knowledge of nature. In science there does seem to be a difference between (a) procedural rules about how to investigate, compile and interpret data, or even skills at forming and pursuing hypotheses, and (b) scientific laws as an expression of the product, i.e. as a body of knowledge that answers questions about existence. At first glance, artisan rules and knowledge seems to align more with the former than the latter, but the two are entwined in a view of nature in which knowing and being are intimately connected. Polanyi shows that the former are required to fully understand the latter and may even be constitutive of it. The laws are explicit renditions of achievements, and those achievements might then be dwelled in and used toward further discovery.

In moral knowing, the scientist's focus on producing knowledge of nature, and the artisan's focus on producing a good performance or product come together. For Polanyi, moral laws and values, like scientific laws and facts, catch and express objective features of reality (*KB*, 33). They also guide one in a way of living that results in a product with real qualities: the good person.

2. Moral Knowing and Training

Moral knowledge, like scientific knowledge, is similar to an artisan's knowledge. Aristotle's recognition of practical wisdom, or *phronesis,* as an essential moral virtue emphasizes these similarities. *Phronesis* is a skill that requires tacit knowledge. It requires experience both in order to develop its principles and to properly apply them to particular situations. It is a bottom-up knowing rather than a top-down knowing.[5]

For Aristotle developing *phronesis* requires practice, and the right kind of practice, just as, for Polanyi, developing the ability to reason and evaluate in the sciences requires the right sort of experience. Aristotle notes that to be good at mathematics, or to have theoretical knowledge, does not necessarily require extensive life experience of particular sorts, but being a good judge does require it (*NE*, 1095a). Also, whereas we would want a doctor to have experienced suffering and empathize with the sufferer we would not want a judge to have participated in evil and have too much empathy for immoral actions. Having the right sort of experience is important for the person of practical wisdom; the right sort of experience helps the person develop the ability to reason and judge well, and it also helps him develop the right sort of feelings. With the right feelings, the person of practical wisdom thus makes the right decisions effortlessly and performs the right actions willingly.[6]

As in the crafts and sciences, the moral novice achieves moral excellence by engaging in practices that develop his ability to reason well in matters of action. Moral excellence, however, is broader and deeper than excellence in any particular craft or scientific field; it is a skill for living that involves a comprehensive way of engaging with the world and acting in it in a masterful manner. The moral virtuoso does the right thing "to the right person, in the right amount, at the right time, for the right end, and in the right way" and doing so he practices virtue (*arête*) or excellence (*NE,* 1109a 27-30; 1106b 20-25). He achieves excellence, not just in performing a particular task, producing an artifact, or building a body of knowledge, but in living—and the chief product is the actualization of his own being.

Living moral excellence is a complete way of being for Aristotle. Polanyi agrees, hence he can say, "[M]oral rules control our whole selves rather than the exercise of our faculties, and to comply with a code of morality, custom and law, is to live by it in a far more comprehensives sense than is involved in observing certain scientific and artistic standards" (*PK*, 215).

Seeing moral knowledge as a skill at living well brings about implications that Aristotle recognized: it involves having a virtuous character, which for Aristotle involves having the right education or upbringing (i.e., the right sort of experiences), and the right feelings, as well as the right knowledge and judgment. To become a virtuous or excellent person, for instance, one must be raised in a city with the good laws (*NE*, 1102a) and one must respect the right sort of people as exemplars of the right sorts of actions to emulate. As Polanyi says, "By recognizing our heroes and masters we accept our particular calling" (*SM,* 98; see also *KB*, 136). Stories or parables with the right moral message are also important for training moral sensibilities, since much tacit information is embedded in the details of the story and this supplements the moral message. Simply stating the message would not only invite misinterpretation, it would not have as deep an effect on the sentiments.

Having the right feelings is important, because sentiments not only facilitate judging a situation appropriately, they allow one to respond willingly with the right action in the right way and for the right reasons. Training the emotions is also important because, in virtues of character, the virtue itself is predicated on having

the right feelings (*NE,* 1106b). For example, in exercising courage one needs to feel the right amount of fear and in being modest one must feel the right amount of shame.[7]

Having the right feelings is integral to having the right character. Moral action comes from a state of virtue, or what we might call a disposition to virtuous acts, with its attendant feelings (*NE,* 1105b, 1106a). The character, not the individual virtuous acts, determines whether or not a person is virtuous. One might perform virtuous acts by merely following rules, but this does not guarantee that the character is virtuous. The two, however, are intimately connected. As Aristotle notes, when virtuous acts are repeatedly performed over time, the character can become virtuous. Becoming a virtuous, excellent person involves *practicing* the virtues; it involves training, repeated performance, and correction. The correction might be administered by a master; or perhaps by a more advanced student, e.g., by a fellow citizen who has achieved competence; or by the judge who interprets the laws, i.e., the moral rules sanctioned by society.

The skills one develops through practice are grouped into particular moral virtues, such as courage, moderation, justice, and generosity. The overarching skill needed for the proper execution of the particular moral virtues is the intellectual virtue of practical wisdom. One must have all the virtues of character in order to have *phronesis* and if one has *phronesis* one will have all those other virtues as well (*NE,* 1144b). *Phronesis* and virtue, judgment and experience, advance together in dialectical progression.[8]

3. Moral Excellence is Embodied and Cannot be Reduced to Rules

Moral rules, maxims and principles emerge from engagement in virtuous practices. For Aristotle, the virtues are human excellences that cannot be reduces to rules, but rules can serve as guidelines, hence following good laws can guide one toward virtue. For instance, one might have it as a rule of courage that one should never desert from a battle. But there may be occasions in which desertion might be the morally right action to perform (perhaps one's commander has broken ranks, or one finds oneself on the wrong side of an unjust war, or some other unforeseen circumstance occurs). When faced with such a situation, the morally virtuous person feels the right impulses and knows the right thing to do; he has the excellence of practical wisdom and knows which moral principles apply to the particular situation and how to apply them correctly. Aristotle, like Polanyi, recognizes that there is no determinate rule, or complex of rules, sufficient for applying a rule of practical wisdom.[9] This builds a strong connection between Aristotle and Polanyi's conception of the authority of the expert.

For Aristotle, the ultimate arbiter of morality is the *phronimos*, the person of practical wisdom. His way of being issues in right actions and he is the ultimate judge. The person with practical wisdom does the right thing at the right time in the right way, largely based on tacit knowing. As in the crafts and sciences, any rule might be misunderstood or misapplied. The authority of the expert, as the bearer of knowledge by virtue of his experience and character, is indispensible.

Just as a scientific text or a trade manual is a poor guide to achieve mastery in a particular field, so moral rules and explicit systems of morality are poor guides on their own for becoming a moral virtuoso. Moral rules or principles may be expressed directly by the virtuous person, as a doctor might write a medical textbook, or they may be our own attempt to catch and systematize an excellent person 's way of being, as in the accounts of the gospels. By reading the works of a master, or cataloguing the exemplar's actions and generalizing what he has done, we can form useful general principles, such as "do not kill," or "never be unnecessarily cruel," or "love one another."

In virtue ethics one asks, "What would the virtuous person do?" In Christianity one asks, "What would Jesus do?" We might guess, with universal intent, what the master would do in a novel situation, but we might very well be wrong. The good person sees what we do not because his character has been developed in the right way and ours might be askew. We may lack the practical wisdom essential to fully understand the principles and their proper application. Also, since the self is part of the product, what is right for the virtuous person at his stage of character development might be wrong for us.[10]

The virtuous character is such that the inclination of feeling is in line with the correct moral action; his "spontaneous" feelings can be reliable guides to right actions. Acting on his/her feelings is one way a virtuous person might be said to follow the spirit rather than the law. For the virtuous person, mastery is such that feelings work in accord with the goals of the law. The good person's actions, however, are so embedded in tacit knowing that his own judgment of *how* he knows might be wrong. What is obvious for him, or fundamentally tacit, might not make it into the explicit text or manual, and even if it did, chances are it would not help us. Some masters are better at doing and performing rather than analyzing and making knowledge explicit transferable.[11] This is one of the reasons why apprenticeship is so important, the master craftsman cannot always tell us how he does what he does, but if we do as he does with his guidance, we will learn what he knows.

The person of practical wisdom is similar to the master craftsman or scientist in that neither can make his or her knowledge fully explicit in general rules or instructions, but both can be a role model and provide guidance or education. The master craftsman-apprentice model of knowing is thus especially applicable to moral knowing, since it encompasses a comprehensive way of being. We don't merely rely on the person of practical wisdom, we seek to become like him or her. We emulate moral heroes and seek to shape our character so that we too are able to –as if by instinct or intuition—do the right thing at the right time to the right person in the right manner for the right reasons—and enjoy so doing.

II. Ways of Being Embody Answers to Heuristic Passion

The way of being of the good person constitutes an answer to questions about the human condition. The good person builds his character and solves problems that new situations bring by actively engaging in an ever-changing world. But the good person is also a product of a tradition. Virtuous engagement with the world produces a body of moral knowledge and values that finds expression in a system of moral laws; and a system of moral laws, in turn, helps to produce virtuous people.

1. Superior Knowledge and Traditions of Inquiry

Where does the moral virtuoso's knowledge come from and to where does it proceed? For Aristotle the setting and precondition for the person of virtue is the *polis*. The virtuous person is typically supported by the fund of knowledge and standards available to him through his culture and tradition, just as the scientist is supported by the fund of knowledge in his community and its history. This common fund of knowledge and accepted standards are what Polanyi calls "superior knowledge."

> Take two scientists discussing a problem of science on an equal footing. Each will rely on standards which he believes to be obligatory both for himself and the other. Every time each of them makes an assertion as to what is true or valuable in science, he relies blindly on a whole system of collateral facts and values accepted by science (*PK*, 375).

Science is "a *coherent system of superior knowledge, upheld by people mutually recognizing each other as scientists, and acknowledged by modern society as its guide*." Superior knowledge is a "mediated consensus" that also contains dissenting voices. And not only science, but "the entire culture of a modern, highly articulate community" is a form of superior knowledge, even though "only a small fragment of his own culture is directly visible to any of its adherents" (*PK*, 375).

Alasdair MacIntyre discusses the importance of being a member of a moral tradition of inquiry in order to understand and reason about morality properly. The very intelligibility of a moral statement or law presupposes the background knowledge gained by participation in the knowledge and practices of a community.[12] MacIntyre's views here can be seen as a valid development of Polanyi's understanding of tacit knowing, superior knowledge, and heuristic passion.[13] For Polanyi, "A dialogue can be sustained only if both participants belong to a community accepting on the whole the same teaching and tradition for judging their own affirmations. A responsible encounter presupposes a common firmament of superior knowledge" (*PK*, 378).

MacIntyre's emphasis that the *rational coherence* of moral statements depends on a tradition of *inquiry*, along with Polanyi's emphasis on *intellectual and moral passion*, show us that the accumulated reservoir of traditional, scientific and moral knowledge is an achievement driven by deep and consuming meaningful questions that ignite our passion and set the imagination in search of discovery. Traditions are an ongoing dialogue about fundamental and evolving questions, and the answers that are given are accepted as authoritative only within the rational context that allows for the intelligibility of certain possible answers: Wittgenstein says, if a lion could talk we could not understand him (*PI*, 223); Polanyi says that if we could be transported to a library 1000 years in the future, we would not be able to understand its contents (*Logic of Liberty*, 198-199).

The excellent person had the right upbringing in the *polis* and most important to that upbringing was an education in good laws.[14] By being raised with good laws, moral rules, and customs, the virtuous person dwells in and internalizes the moral ideals of his community, not just in theory but in practice. His way of being therefore embodies answers to questions that have arisen for that society over time, and he himself is an answer to questions about the right way to live that emerge from his biology, practices and tradition. The intellectual and moral achievements of a culture or tradition also catch explicit answers to questions about what it means to be a human being more generally, which may point to a common core morality or a common way of being an extraordinary human being.

2. The Emergence of Moral Knowledge and Sentiment

From an Aristotelian and Polanyian perspective, one can see how a fund of tacit and explicit knowledge emerges in a tradition. The questions, and the passion driving the questions, are integral to the solutions that form the body of knowledge embedded in a scientific, moral or religious tradition as they evolve over time.

For Aristotle, the person of practical wisdom, who has the right experiences and feelings, develops the ability to formulate a moral rule and has the proper judgment to know how to apply it. There is an *epagoge*, or induction from the particulars of experience, to *archai*, or first principles which are revealed to *nous*, or intellect (*NE*, 1142b1-5).[15] These principles might then be grouped into rules for particular virtues and then practical wisdom, *phronesis*, allows one to navigate and weight principles or virtues amongst one another and know what

general rule applies to what particular situation.

Polanyi's epistemology provides for a similar induction from experience to principles, described as the tacit inference *from* particulars *to* joint comprehensions.[16] But Polanyi, in contrast to Aristotle, also provides for the emergence and discovery of new values in the course of history, and points to ever higher levels of inductive integration. Polanyi's description of discovery brings about the following picture of how Aristotle's *epagoge* works to bring us a fund of moral knowledge.

A person, with his or her body and background experience, encounters an event, and with the experience of the event, and others like it, comes a feeling that drives the moral passions (perhaps one witnesses the killing of a fellow human being, and is horrified). The person may judge those sorts of events as good or bad with universal intent immediately, or questions may be evoked, that persist as deep and complex moral dilemmas (perhaps the killing is a legal execution). The person may carry this question with him for a long period of time, just as one may carry and incubate a scientific problem for a long period of time before a discovery is made. "Such a quest can go on for years" ("CI," 261). With the focal goal of an answer, evidence and experience is collected that helps to move the person toward resolution. A new value or maxim might then emerge as the joint comprehension of the experience and provide a solution to the dilemma. This solution also comes with a feeling and can act as the premise of a moral judgment. The value or rule (perhaps expressed as "a life for a life", or maybe "all life is sacred") can act as a summation of this gestalt; it provides the explicit aspect of the new integration. The person then understands the particular acts and events in terms of the meaning that the new moral maxim helps make explicit. If the question causes a radical enough shift, a whole new interpretive framework might emerge with the solution. And a shift in the interpretive frame at the level of morality entails a shift in mode of being of the whole person.

> When we modify our judgments about anything, we make subsidiary use of certain new principles—which is to say, we dwell in them. Because of the circumstances we actually make existential changes in ourselves when we modify our judgments. For we literally dwell in different principles from the ones we have been at home in, and we thus change the character of our lives (*M*, 62).

In Polanyi's view, our feelings can guide us to answers. They can provide anticipations of what is true and right and can give voice to knowledge held tacitly. Polanyi affirms this in recognizing the role of anticipatory intuitions in creative discovery in science and in recognizing the feeling of heuristic satisfaction that validates a discovery as genuine ("CI," 262; *KB*, 149; *PK*, 320-321).[17]

Feelings have an important place in understanding whether and why something is right or wrong. Both thoughts and feelings can be joint comprehensions of meaning focally experienced, but feelings are not strictly divorced from thoughts, and feelings and intuitions are not the rock bottom foundations that sentiment-based or intuitionist theories maintain. Sentiments can be the felt accompaniment of prior judgments as well as be the basis of future judgments.[18] For Polanyi, there is always subsidiary tacit knowledge and experience at work even in a raw feeling or a core moral intuition, even though such may present themselves, as any focal experience does, as unitary and immediate. Polanyi describes this apparent immediacy as resulting from the *vectoral* quality of tacit integration that takes us from the clues to the focus without direct awareness of those subsidiaries; the clues that we attend from "become, as it were, transparent" (*KB*, 145). Some sentiments or intuitions are more basic to human ways of being than others, but practices help make feelings, and as we learn what the right thing to

do is, we re-evaluate our feeling in terms of the new meaning that we give those sorts of events. In fact, simply reevaluating an event in the light of a new meaning will change the feeling that the event evokes. For example, feelings will change when one first sees a killing as a brutal murder, then as an act of justice, and then as a violation of the sacred.[19]

We move *from* particular experiences *to* a joint comprehension that is expressed in a maxim, and then we use that joint meaning to understand and judge experiences. This same sort of integration and judgment is seen with regard to concept formation, and judgments of fact. For example, we move from experiencing particular human beings to understanding the joint comprehension of the concept or essence *human being* (*KB*, 165-168). We then judge the particulars we encounter in terms of this joint comprehension, which provides a "new standard of coherence" ("CI," 262). We can look back through the lens of the concept *human being* to decide whether or not something qualifies as being human. We can even work back and forth between particulars and their integration as we decide, for example, whether a human's capacity to reason, to feel, or to be responsible is the essential defining trait of being human.

So there is actually another step to the *from-to* process in which the *to* is now seen *through*, i.e., the focal *to* submerges to act as a subsidiary lens through which we understanding the particulars from which we started. It is a *from-through-to* structure– we dwell in the meanings given by higher levels of integration and they are seen *through* in order for us to understand the lower level constituents of an integration: we see the clues in a new way.[20]

This ascending *from-through-to* structure of tacit integration gives us a model for the successive emergence of moral rules to the highest moral principle in a moral system. From experiences, different moral maxims emerge and then questions are raised about consistency between different rules, priority of one rule over another, and which rules apply to what sorts of situation. And so we move *from* different maxims *to* a higher moral principle as a joint comprehension that helps us to order and weigh maxims and helps us to judge when a particular maxim should be applied or when it should be trumped by another. Through experience, debate and discovery, we move from disparate moral feelings to a guiding maxim, and from guiding maxims to the comprehensive moral systems of traditions of inquiry.

But the questions and the discoveries raised by engagement in human existence are not always capable of being articulated in explicit propositions or commands. Moral heuristic passion strikes deeper and more comprehensively than intellectual heuristic passion. Moral questions and paradoxes evoke answers not only in the form of explicit statements or doctrines. Rituals or even mysteries can provide a heuristic satisfaction in a way that is not always rationally explicable.

For Polanyi, even some explicit doctrines may not have a literal truth but may have a metaphorical or symbolic truth that cannot be reduced to explicit statements of knowledge. For instance, Polanyi discusses how reciting the Lord's Prayer might express a deep consummation of his own being even though he does not believe the sentences of the prayer to be true literally.[21]

Questions about the relation of the individual and her good weighed against the good of the community may receive an answer in the form of an explicit constitutional right. Questions about deeper human striving and the meaning of life may get an answer in the form of a ritual practice (such as a Hindu cleansing ritual) or a doctrine (such as the sacredness of all life). Questions about the relation of the human to something transnatural or divine

might find its answer in a dogma or mystery (such as the Christian doctrine of the incarnation of Christ).[22] Questions about human suffering might find an answer in an experience of enlightened liberation.

3. Moral Knowledge Articulates Reality

For both Aristotle and Polanyi this process of moving from experience to principles is a discovery of the objective reality of nature. For Polanyi, moral values emerge, but they are personal and not merely subjective; they are held with the same universal intent and they command the same commitment as a scientific claim to truth. Polanyi says, "[T]rue human values exist" (*KB*, 33).

Intellectual and moral achievements are personal achievements made by people who are committed to doing the objectively right thing and avoiding the objectively wrong thing. Polanyi says, "Like the artist and scientist, moral man strives to satisfy his own standards, to which he attributes universal validity" (*PK*, 214). Polanyi's conception of universal intent brings out strong Kantian notions of duty and a commitment to universally applicable standards.[23] There is thus a dimension of moral law as a command that express a truth about human reality which demands our recognition and submission.

For both Aristotle and Polanyi, different societal backgrounds provide a place from which to begin our search for moral satisfaction, but this does not entail that different opposing moral values are equally true. Aristotle's emphasis on upbringing and Polanyi's emphasis on superior knowledge point to the notion that some people might be in a better position to apprehend moral truth than others. For Aristotle, the discovery of a first principle is an unveiling of reality. Similarly with Polanyi, our personal knowing can give us access to the truth of being. For Aristotle there was one trajectory for an eternally fixed human nature and there was only one possible interpretive framework. Polanyi's model is one of multiple and progressive interpretive frameworks and the emergence of new ways of being, but the Kantian undertones in Polanyi's notions of commitment and universal intent suggest the same sort of discovery in an emergent reality for morality as we have for science.[24]

To the extent that we share a common human nature and have common problems, there is the possibility of a comprehensive moral standpoint that catches common human truths. And if there is such a thing as a common human desires and goals, a higher level moral integration might reflect an emerging human reality. In Polanyi's view, there is a coordination of our achievements in knowing with the changing structures of an emerging world. Knowing seeks being through heuristic striving.

III. The Spirit and the Letter of the Moral Law

In examining morality from a Polanyian perspective we have seen that the letter of the law has two main functions and can be in tension with the spirit of the law in at least two ways. The primary goal of following the letter is the transition to a richer way of being that is embodied by the good person, i.e., the moral virtuoso. Moral maxims and laws can thus act as procedural rules for novices, but when the novice is fully initiated he can transcend the rules and perform moral actions with the same universal intent and freedom as the master.

From this perspective practicing the letter of the law is a pedagogical and behavior modifying tool that

helps to bring one up to the joint comprehension out of which the master lives, which is the locus of the spirit. While the letter of the law is the safest bet for the novice, the spirit of the law takes precedence for the master, and laws may even be broken for the good.

We have also seen that, in addition to being a method for achieving a way of being, a system of moral laws can express a body of knowledge that has a claim to objectivity. The practices and rules set the basis for understanding and experiencing an emergent moral reality. This reality is embodied in the exemplars of a moral tradition and expressed in its principles and maxims. Here the tension between the spirit and the letter of the law results from the incomplete nature of letter of the law itself, which is the explicit expression of a tacit fund of knowledge. When we achieve moral mastery, we do not dwell in principles or rules, we dwell in the way of being of a person, and the principles and rules are merely our best explicit grasp on that comprehensive meaning (see *KB*, 136).

As one develops from being a moral novice to being a virtuous person, one develops a different relation to rules, maxims, and principles. Whereas for the novice the tension between the spirit and the letter of the law may result from ignorance in understanding or applying the law or weighing its competing maxims, for the expert the dissonance is between the law as an explicit expression and the comprehensive meaning and way of being that the law seeks to articulate and promote.

A third tension between the letter and the spirit of the law might also occur as discoveries are made in response to moral questions. The new standard of coherence might shift so much that a radical transformation must be undergone to achieve the new moral framework. Here the old expressions of law may ill fit the new way of being and the letter might oppose the spirit if new wine is forced into old skins.

In looking at similarities between Polanyi and Aristotle, we have seen that Polanyi's epistemology puts him in the general framework of a virtue ethics, but we have also seen indications of the importance of deontology for Polanyi: we see the value of duty and commitment in Polanyi's conception of heuristic passion, and we see the categorical nature of a solution in Polanyi's conception of universal intent. We have also seen briefly how intuitions and sentiments play an important role in moral judgments as the joint comprehension and accompaniments of practices and prior judgments.

In the notion of a *way of being* as the goal of morality, we begin to see a synthesis of moral approaches. The way of being that Aristotle describes as happy, and one which also raises the level of happiness throughout humanity, would seem to be the most choiceworthy. Yet the goal of following the moral law is not merely a state, i.e., happiness, or a state of affairs, i.e., a flourishing society. The moral laws are designed to help transform our ordinary way of being into that of the good person. In that respect they are subservient to an end. But if the laws are also contiguous with a way of being, they are not merely means to an end; they are also an expression of the character we seek to attain. Moral law may therefore express the dignity we reserve for people and the truth we accord to reality.

Endnotes

[1]This article is the first part of a larger project titled "From Science to Spirituality: A Polanyian Perspective on Moral Law, Virtue For-Itself, and Religious Transformation", which was presented at the Polanyi Society meeting at the APA in Philadelphia, December, 2008. By emphasizing the connections between Polanyi's philosophy and Aristotle's virtue ethics, this first part begins to set the basis for a Polanyian picture of how

morality works and how different ethical systems can fit together. In the second part, by looking at differences between Polanyi and Aristotle, I expand the picture to account for when and why virtue should be practiced for itself and to show how a Polanyian might understand the transformative capability of spiritual enlightenment.

[2] In "Virtues, Ideals, and the Convivial Community: Further Steps Toward a Polanyian Ethics" (*TAD*, 30:3 [2003-04]: 40-51), Walter Gulick mentions the affinity between Polanyi's philosophy and Aristotle's ethics that I will elaborate upon here. He writes, "Polanyi, like virtue ethicists, believes that moral actions arise out of embodied skills and deeply held commitments. He would acknowledge that ethical decision making utilizes a practical reasoning process, consistent with Aristotelian *phronesis*, that wisely applies ideals and values to specific situations. In sum, Polanyi would appreciate how virtue ethics illuminates aspects of the tacit functioning of the moral actor. But it is also the case that Polanyi never devotes attention to the virtues as such" (45).

[3] In "Creative Imagination," Polanyi illustrates how explicit instructions can hinder the development of a skill in his discussion of how one learns to use inverted spectacles (259). Polanyi's 1966 "Creative Imagination", henceforth "CI," is reprinted in R.T. Allen, ed., *Society, Economics, and Philosophy: Selected Papers (of) Michael Polanyi*, (London:Transaction Publishers, 1997), 249-265.

[4] Wittgenstein, *Philosophical Investigations*, (Oxford: Basil Blackwell, 1991), #198-199. Mark Discher also sees how the explicit rules are inadequate for Polanyi and are subject to Wittgenstein's criticisms regarding rule-following. See "Michael Polanyi's Epistemology of Science and Its Implications for a Problem in Moral Philosophy," *TAD*, 29:1 (2002-03): 49-59.

[5] *Phronesis* is geared towards knowing what is contingent, i.e., what is not unchangeably true knowledge (*episteme*). All knowledge about nature is based on *phronesis*. This narrows any gap between moral and scientific knowledge for Aristotle as well as for Polanyi. References to Aristotle marked *NE*, refer to *Nicomachean Ethics*, trans. Terence Hawkins (Indianapolis: Hacket Publishing Co., 1999).

[6] Polanyi also recognizes the importance of having the right feelings in science. He writes, "[S]cience, by virtue of its passionate note, finds its place among the great systems of utterances which try to evoke and impose correct modes of feeling. In teaching its own kind of formal excellence science functions like art, religion, morality, law and other constituents of culture" (*PK*, 133).

[7] Also, as Goodenough and Deacon stress in "From Biology to Consciousness to Morality" (*TAD*, 30:3 [2003-04]: 6-21), one must experience pleasure in witnessing, as well as performing, a virtuous act (18-19).

[8] See MacIntyre, *Whose Justice? Which Rationality?* (Notre Dame, Indiana: University of Notre Dame Press, 1988), 118; henceforth, *WJ?WR?*.

[9] For Polanyi see *M*, 30 and *KB*, 105 (on Kant); for Aristotle see MacIntyre, *WJ?WR?*,116-117.

[10] It is also the case that the excellent person can function for us as an ideal we seek to live *through* rather than be any actual person, i.e., a joint comprehension of good practices –partially embodied in particular people— that we attempt look *through* to find the good action to perform in a particular circumstance. The standard we defer to is not a law but this idealized person (*phronomos*) who can take into account all the competing principles and contingencies to make a good decision. What the good person would do also has right and wrong answers that can be intelligently considered, which marks a transition from a description (fact) to something normatively binding (value).

[11] Others are better at training and analysis than they are at performing skills, e.g., the coach and the critic. The moral master may not know how he does what he does, just as the coach or critic might have a better appreciation of the clues than the athlete or artist.

[12] See *After Virtue*, *WJ?WR?* and *Three Rival Versions of Moral Enquiry*. MacIntyre's choice for Aristotelian philosophy as the correct moral tradition is in part due to its ability to explain the moral understanding present in other traditions. I would take the same tack in defending a Polanyian moral philosophy.

[13] John Flett in "Alasdair MacIntyre's Tradition-Constituted Enquiry in Polanyian Perspective" (*TAD*, 26:2 [1999-2000]: 6-20) discusses common themes in MacIntyre and Polanyi, especially the conception of knowing as a skill. He says, "Intellectual passions are also, for Polanyi, tied to apprenticeship in a particular articulate

tradition which must be supported by wider culture that, in turn, supports ideals" (17). Flett notes that MacIntyre downplays the role of passion to promote an internal rationality.

[14]Hence ethics, for Aristotle, leads directly into politics, which answers questions about how to make people virtuous.

[15]This notion of an *epagoge* as an unveiling of reality, in which practical wisdom opens to the reception of theoretical knowledge, is a way of unifying Aristotle and Plato suggested by Hans-Georg Gadamer (in a course on Aristotle's *phronesis* conducted at Boston College in the Fall of 1984). MacIntyre makes a similar point in *WJ?WR?* chapter VI.

[16]C.S. Peirce's notion of *abduction* may better describe the "induction" of tacit inference. For more on this possibility see Phil Mullins, "Peirce's Abduction and Polanyi's Tacit Knowing," *The Journal of Speculative Philosophy*, 16:3 (2002): 198-224.

[17]Moral passion is essential, as Goodenough and Deacon (2003-2004) show by taking the example of the psychopath, who could do the right thing but would not be acting morally. Some essential tacit coefficients would be absent (17).

[18]Unaccountable fear of a particular stranger, for example might be traced to reasons why one should be afraid, e.g., to clues as subtle as the dilation of the eyes upon the mention of a particularly gruesome word. We may not be explicitly aware of the reasons for a fear response, but tacit knowledge of those reasons gets expressed in the feeling.

[19]If a feeling persists that *should* change in the light of a judgment, it may be a sign that we have not yet re-educated our habits in the light of the proper judgment, or it may be a sign that the judgment is wrong and the feeling expresses tacit information that was missed, i.e., all the clues that are important for a proper resolution have not been integrated in the judgment's purported resolution.

[20]Walter Gulick offers a somewhat different interpretation of how we become aware of subsidiaries in this same issue of *TAD* when he distinguishes analysis from evocation, both occurring within the *from-via-to* structure of symbolic understanding. He sees pattern recognition and integration as basic to the concept formation that may lead from experience to maxims to principles. I explore my *from-through-to* structure in relation to concept formation in Lowney, "The Tacit in Frege" forthcoming in *Polanyiana*, 17:1-2 (2008).

[21]From lecture notes quoted in Scott and Moleski, *Michael Polanyi, Scientist and Philosopher*, (Oxford: Oxford University Press, 2005), 273; see also *M*, 155.

[22]Avery Dulles takes a Polanyian approach to religious dogma. He sees that a dogma can be the answer to a consuming question in a religious tradition (see *The Survival of Dogma*, [New York:Crossroads, 1982]; *Models of Revelation*, [Garden City: Doubleday, 1983]). Dogma may act like constitutional law in that it has openness to as yet undiscovered interpretations that will make more sense as our pursuit progresses and moral reality unfolds.

[23]As Gulick writes, "Polanyi is sympathetic to the senses of obligation and rightness that are found in deontological theories. Persons are called to attend to the call of conscience and submit to their communally affirmed values and ideals. Rightness, however, is not something imposed by a social authority; rather it is a communally endorsed standard guiding the performance of one seeking to do the good with universal intent. Values like truth, beauty and justice do not exist in some sort of Platonic eternal ideal realm, for they are 'things which can be apprehended only in serving them' (*PK* 279). Our obligation to them flows out of our commitment to them, which in turn is based on our assessment of them as real and worthy of respect" (*TAD*, 30:3 [2003-04]: 43).

[24]This, however, can cut both ways and make Polanyi appear to be an ontological relativist.