A POLANYIAN PERSPECTIVE ON THE PLACE OF KNOWLEDGE WITHIN THE CURRICULUM

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ABSTRACT

A new national school curriculum in Wales that parallels reforms in other countries and regions is in the process of being implemented. Several issues debated in the context of these reforms relate to the effectiveness of a school's curriculum to help young people develop skills and dispositions believed to be necessary for participation in the modern economy. Others are concerned about the loss of core subject related knowledge linked to academic disciplines. Wrestling with these questions motivated me to consider how Polanyi's thought could point the way to addressing these issues, particularly his concept of commitment and argument for a hierarchically structured view of reality. In this paper I explore these issues by drawing from the sociologist Michael F.D. Young's work on 'powerful knowledge' as a way to frame my consideration of the curriculum debates from a Polanyian perspective. Young argues that providing access to knowledge should be seen as the primary goal of school curriculums and argues that the best route to achieving this is through academic subjects. The paper will show how this argument is strengthened by consideration of insights from Polanyi.

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Introduction

Curriculum reform across several more economically advanced countries and regions, including Wales, New Zealand, and British Colombia, have been described by their respective governments as providing a 'radical' response to changes brought about by globalization and digital technologies. Encouraging greater educational engagement and participation are also aims, with many young people seen at risk of dropping out of education too early. Teacher training, school organization, and student qualifications will be affected by the reforms as will the place of knowledge in school curriculums. In this paper, I will begin by exploring some of the ways these influences have been conceptualized and led to tense curriculum debates. Next I'll explore the sociologist Michael Young's theory of 'powerful knowledge' and discuss its relevance. This theory shares Polanyi's concern with the preservation and pursuit of truth (Polanyi 1936). The paper will conclude by exploring how consideration of Polanyi's ideas mediated through Young's theory of knowledge within the curriculum are relevant to present curriculum discussion.

Defining Curriculums and the Shape of Current Debates

Evaluating the reform of any curriculum is complex because of differing definitions and models of design. For instance, several reforms in the aforementioned countries have drawn from definitions aimed at bridging tensions between academic subjects-based versus vocationally orientated skills/competencies-based curricula. These reforms also seek to balance these two approaches, along with aiming to promote civic values and the development of desirable personal qualities (e.g., confidence or curiosity) in young people.

In the UK, curriculum debates continue to confront tensions arising from the breakdown of a post-war consensus on the value of a tripartite educational system (Moore 2014). This was grounded in a belief that some people were more gifted academically, others practically and that some only required basic levels of numeracy and literacy in order to find worthwhile employment. Despite a shift in consensus during the 1970s towards a state school system that was the same for all pupils ('comprehensive schools'), beliefs about innate ability have continued to influence educational practice through school-based setting of students, along with differing pathways to achieve secondary-level qualifications. Consequently, questions about the balance between skills and knowledge, for example, often reflect different attitudes towards the relative value of segregation based on academic profile versus unsegregated school systems.

The OECD (Organization for Economic Co-operation and Development), which has played an influential role in several educational reforms, reduces the different positions to two models of curriculum, *process* and *product*, which they conceive as reflecting the influence of two binary factors: teacher/student control and content/

skills. Divided in this way, curricula are viewed as either vehicles for delivering certain *products* and *outcomes* or a description of *experiences* and *processes* considered valuable to a child's development. These models are clearly incomplete and omit curricula that reflect teacher control where the focus is on skills related to specific vocations, such as in apprenticeships, or curricula where students control choices of content (e.g., student-directed research). Product models are subject-focused and emphasize specific educational outcomes evaluated through examinations; process models, on the other hand, tend to encourage greater pupil autonomy and are evaluated through projects and course work that provides opportunities for active learning and the cultivation of competencies.

Knowledge within Curriculums

As suggested above, knowledge has become a particularly contested concept within curriculum debates. Often its role is framed as reflecting a transmission pedagogy leading to examination-based outcomes or it is understood as something students need to construct themselves through self-directed activities. Different types of knowledge appear to be implied and attempting to describe these is difficult. In fact, one of the problems with discussion of curriculum reform is that terms such as 'knowledge' and 'skills' are interpreted differently by those on opposing sides of the debate.

However, Aristotle's three kinds of intellectual virtues prove useful as short-hand to refer to the kind of intellectual engagement implied in different kinds of curricula. These are *episteme*, from which we derive epistemology, which I will use to designate curriculum focused on helping students acquire theoretical and conceptual knowledge; *techne*, our root for technology and technique, will refer to curricula which places more emphasis on students' development of skills, particularly relating to vocational domains; and *phronesis*, traditionally translated as practical wisdom, I will use to identify kinds of knowledge linked to personal dispositions and competencies. *Episteme* can be viewed as context independent knowledge and it dominates our thinking about knowledge in relation to academic subjects. *Techne* is recognized as valuable to understanding in specific fields, despite its context dependence, because we see there are skills and know-how that require hands-on, practical knowledge.

Episteme, which we can see as closely related to academic disciplines, does not necessitate a pedagogy of transmission where pupils only have to absorb and remember factual statements rather than actively learn and understand concepts. Theoretical and conceptual knowledge derived from academic disciplines is constantly being reformulated and decontextualized by good teaching that takes into account students' social contexts (Vygotsky 1987; Bernstein 2000). However, subject-based teaching, more closely linked to academic disciplines, does acknowledge boundaries between everyday experience and curriculum knowledge, and aims to provide students with access to knowledge beyond their ordinary experiences. This is not to say that what is relevant

to them is totally ignored but it is put to use only in the service of acquiring *episteme* through appropriate pedagogy (Rata 2016). The problem with *phronesis* and *techne* is that they tend to be context-dependent, particular, and more changeable. Basing a curriculum on them leaves children vulnerable to the instabilities of their encounters with reality in everyday life, rather than allowing them to apprehend and understand the world beyond. Consequently, what can be represented as encouraging more active construction of knowledge through skills and competencies may in fact leave some students constrained by their circumstances (Bernstein 1996).

As a former teacher, I was broadly supportive of curriculum reforms that appeared to promote learner-directed study and activity-focused pedagogies, but reflecting on Polanyi's thought compelled me to reconsider this stance. Polanyi recognizes the embodied, active nature of personal knowing but also conceives of encounters with reality within a hierarchical ontology (Jha 1997). New knowledge deriving from discovery is grounded in prior knowledge and will be verified within academic communities. Jha also makes the important point that for Polanyi theoretical knowledge, *episteme*, is important in relation to the justification of knowledge, while *phronesis* and *techne* are important to discovery (Jha 2002, 299). This point draws attention to the place of discovery, something overlooked in much curriculum discussion. The relevance of this was brought into clearer focus through my reading of the sociologist Michael F. D. Young. In his important book about curriculum theory, *Bringing Knowledge Back In* (2008, 110-111), Young discusses Polanyi's "The Republic of Science," arguing that the conception of the university he presents can be used as the basis of reconceiving the relationship between the state and teachers in education practices. Young argues that the core value of schools should be the "acquisition and transmission as well as the creation of knowledge" (102). Aspects of Young's analysis are worth reviewing as a background to applying Polanyi's thought to the curriculum debate.

'Powerful knowledge' and Young's Future 1, 2, 3

Michael F. D. Young is a curriculum theorist who has spent a long career reflecting on curriculum design and its impact on social justice. Recently he has moved away from an earlier advocacy of child-centered approaches to curricula shaped by a socially constructed view of knowledge that saw traditional school subjects as representing 'knowledge of the powerful.' In place of this, Young developed a framework that makes a social realist view of knowledge central to a defense of subject-based education as the best means for ensuring equitable access to 'powerful knowledge,' i.e. the very knowledge those in power value the most highly (Young & Muller 2010; Young et al. 2014). Following Durkheim and Vygotsky, Young suggests that it is important to maintain a distinction between everyday knowledge and skills, which tend towards addressing 'how' questions, the kinds of knowledge children encounter in their everyday lives, from the specialized knowledge they are provided access to through a school curriculum,

which addresses 'what' questions, enabling pupils to "grasp alternatives" beyond their experience. If we apply the Aristotelian terms here, Young's everyday knowledge resembles *phronesis* and *techne*, while specialized knowledge, linked to academic disciplines, resembles *episteme* (Young 2013). One of the most effective means to maintain this distinction is through the boundaries created by school subjects.

Young argues that the place of this knowledge (*episteme*) in the curriculum is rarely given the priority status it deserves and attempts to blur the boundaries between school subjects risk diluting students' access to it. Attention is given to assessment and outcomes, which shape much of the debate about teaching, while knowledge is neglected. Yet it is the access to knowledge a curriculum can provide that is the distinctive educational component of schooling, and should be distinguished from assessment systems and from pedagogy: "It is the knowledge that teachers want students to acquire that defines the curriculum, how they do this is what we refer to as pedagogy and how they reflect on whether they are successful is why assessment is always part of any teacher's pedagogy" (2014, 43).

Trends towards increasing student 'choice' and 'child-centered' pedagogies, often a key component of process curriculums, are potentially problematic because children do not know what they should study, and placing them at the center of curriculum decision-making is to deny them the guidance of knowledge experts, namely teachers. Describing his involvement in South African post-apartheid education, Young notes that freeing teachers from an imposed curriculum appeared liberating, but was not good. Teachers did not know what to teach or how to support students' choices. Without a curriculum plan, progression in acquiring knowledge was limited (Young 2008).

How the boundaries between subjects, and the knowledge they relate to, are maintained and expressed can be viewed through consideration of three modes of curriculum. Young describes these as Future 1, Future 2 and Future 3, implying that curricula express an educational purpose that points to what children will take with them from school into adult life.

In Future 1 (henceforth F1), knowledge is assumed as part of a canon of uncontested information and its acquisition provides a route to university for high achievers. This mode of curriculum is associated with transmission pedagogy and is more closely aligned with the product model. It assumes that there is knowledge that is offered to all, but which benefits only a few (Young & Muller 2010). Those who do not progress in acquisition of this knowledge can be directed towards vocational routes, hence the recent push for apprenticeships in the UK, for example. One of Young's criticisms of this is that knowledge is conceived as something fixed historically. We could say that *episteme*, with its connection to concepts and theory, has been reduced to facts divorced from the disciplines that continue to verify and explore different aspects of reality (2014, 63).

In Future 2 (henceforth F2), knowledge is constructed in response to pupils' needs and interests. This approach can be seen as primarily designed to improve educational performance of low achievers, encouraging them to continue in education, thus improving social inclusion. There is a focus on competencies, while skills-based subjects and boundaries between all subjects are weakened to provide a more vocational focus (2014, 60). This approach leads to the "[p]romotion of facilitative rather than directive teaching" (Young & Muller 2010, 18) and is influenced by the social constructivist and 'child-centered' pedagogies discussed above; here *techne* and *phronesis* are given greater priority. This type of curriculum is similar to the process model where outcomes are also less clearly defined. Young views the adoption of this curriculum as influenced by an instrumental view of education, where there is "no pursuit of knowledge for its own sake" (2014, 61). He describes how there has been a focus on so-called 21st Century skills, emphasizing young people's development of competencies like critical thinking and creativity and how they "manage" knowledge. This is seen as a means to improve employment skills and contribute to economic prosperity. F2 leads to a differentiated curriculum, one aimed at providing access to university, another into full-time work. This, Young argues, along with apparent rejection of elitism, seems attractive to many teachers (2014, 61).

Finally, Young argues that the Future 3 (henceforth F3) idea of knowledge differs from F1 in that it locates knowledge in specialist communities, it is fallible and through its connection with disciplines located in universities can be challenged. This kind of curriculum reflects a greater concern to develop *episteme* than *phronesis* or *techne* in students. Unlike F2, it is not arbitrary knowledge but that "bound by epistemic rules." F3 sees school subjects as the most reliable tool for providing students with access to knowledge and allowing them to gain understanding of the world beyond their everyday experience (2014, 67-68). State schools, Young argues, often want a differentiated curriculum where there are alternative vocational courses for under-performing children. But this is a mistake, for if we start from the premise of the equality of citizens, then all "children as future citizens…have the same educational rights." The curriculum should be seen as "a guarantor of equality," ensuring access for all children to the "best knowledge" or, as he defines this, "powerful knowledge" (2014, 69-71). In this sense, it is also the best means to ensure school education is equitable.

Young and colleagues also discuss the way subjects are organized within communities that provide identity for teachers (Lambert 2014, 162). When the integrity of subjects is neglected, teachers lose important support mechanisms and this will ultimately impact pedagogy (Yates & Millar 2016). It may also be questionable the extent to which teachers can maintain their own intellectual commitment to the pursuit of knowledge when choices about the content they are required to teach become more diffused and fragmented. We must not forget that teachers also educate by their example, including showing enthusiasm for specific fields of study and investigation linked

to academic disciplines. When they are viewed more as facilitators of students' interests than as those who induct young people into modes of conceptual thinking linked to disciplines it may become more difficult for them to foster in their students a sense of the importance of commitment and the possibilities of "intellectual treasures and creative joys" further ahead (*SFS*, 44).

A Polanyian Perspective on Curriculum Reform

Above I have discussed some broad themes relating to a number of pertinent contemporary curriculum questions, particularly as they relate to moves away from a subject-based curriculum design. In this section I will attempt to explain my own reflections on a possible Polanyian response to these questions.

A process-designed curriculum, which is child-centered and encourages enquiry, could be seen as encouraging embodied active learning consistent with some of Polanyi's ideas. For example, he describes how commitment must entail active engagement (*PK*, 313-315), which should not be seen as merely behavioral performances but also involves "mental act(s)" of commitment to encountering reality, reflecting a belief in what is out there to be discovered (Barnes 2018). This activity constitutes a risk, "Only an activity can go wrong, and all activity incurs the risk of failure" (*PK*, 313). It can be argued that allowing students greater choice in their studies is more likely to foster this risky learning, particularly as students might have a greater sense of commitment to what they have chosen to explore.

Furthermore, Polanyi moves from discussing focal and subsidiary awareness to discussion of mastering a skill (*M*, 42-43). He links mastery with purpose and having a sense of the value or meaning of something. Without a clear purpose in view, performance can be impeded by focus shifting to the subsidiary elements. This section implies that the quality of relationship between student and teacher is characterized by respect:

> Feats of intelligence can be observed only if we dwell in their parts as being intelligently integrated, thus identifying ourselves (in this sense) with the person whose intelligence we appraise. Our capacity for making sense of, for understanding another person's action by entering into his situation and by judging his actions from within his own point of view thus appears to be but an instance of the technique of personal knowing (*M*, 44).

As students, it is our willingness to 'identify ourselves' with what a teacher is trying to share with us that facilitates acts of tacit integration essential for personal knowing. The process curriculum can be seen as reflecting a changed relationship between the student and teacher, one that is more egalitarian, in which interpersonal relations are likely to be stronger. Teachers in the cultures this creates will be able to encourage

commitment to learning through their own personal example and engagement with students. These conditions can be contrasted with the tendency of product curriculums to focus on acquisition of knowledge only as it can be evaluated through examinations. The importance of personal relationships shaped by mutual respect and inclusiveness can easily be overlooked in the cultures these 'hot house' environments create, where fear of failure inhibits students' personal engagement. It is one thing to learn material to pass a test, another thing to indwell knowledge.

Educational contexts that encourage positive interpersonal relationships between teachers and students can be seen as beneficial to the learning process from a Polanyian perspective. However, whether the best way to create school environments in which these relationships are fostered is through competency-based, process model, curricula is another issue. Polanyi also writes about the importance of being inducted into traditions and having the opportunity to know what can be described as academic disciplines. As discussed earlier, he presents a hierarchical and multi-level view of the universe within which comprehension of the higher levels of reality cannot be reduced to or derived from the lower (*KB*, 153-155). Understanding particulars is presented as a precursor to the integrations of subsidiary elements that lead to personal knowing and discovery (*M*, 143). In a curriculum sense, concerns to develop *episteme* (subject-based conceptual understanding) is a necessary precursor to students being able to go on to make their own personal discoveries. Models of curricula which ignore the importance of particulars and fail to induct students into the general awareness of fields of meaning, or as Polanyi describes it a "general view about the nature of things" are unlikely to prepare them for independent explorations of reality (*M*, 144).

The tacit dimension depends on conceptualization of reality that is specialized. We need discipline-grounded awareness to know what to look for and to verify the meaning of that which is discovered. Not all new knowledge is discovered from within disciplines; for example, space exploration has contributed new knowledge to several academic fields, but this would not have occurred nor been comprehended adequately without the expert knowledge from within disciplines. Polanyi describes the apprentice needing to trust the master and by implication respect the tradition they represent (*PK*, 53-54). Polanyi provides us a way of seeing the importance of a teacher's sense of tradition. The teacher is actually embodying and modeling commitment to truth that is fundamental to discovery and grounded in academic traditions.

If we apply these Polanyian insights to Young's three types of curricula we can see perhaps more clearly their relevance to debates concerning knowledge:

1. F1 can be seen as leading to a focus on subsidiary items without consideration of purpose and value. This leads to memorization and imitation as the means of evidencing achievement rather than fostering personal commitment and indwelling material studied.

2. F2 encourages engagement and indwelling with the world but may weaken relationships between teacher and student that matter to knowing. Teachers cease to act as trusted guides into broader discipline-based study. What may be gained through more active pedagogies is lost in terms developing the trust in tradition that underpins the beliefs necessary for discovery.
3. F3 respects the importance of disciplines and academic subjects while acknowledging the role of society in verifying what is known. Young distinguishes between the curriculum and pedagogy. Drawing from Vygotsky, he acknowledges the important mediatory role of the teacher in introducing students to knowledge beyond their everyday experience connected to established traditions. He also addresses the issue of how curriculum content should be chosen: not under influence of government instrumentalism but through the professional judgment of educators in contact with disciplines at the cutting edge of discovery. This recognizes the danger of constricting the social role of knowledge to economic values and distinguishes F3 from F1's conservatism in relation to what is considered relevant knowledge to transmit.

A curriculum based on knowledge and grounded in living traditions of academic disciplines is more likely to foster a respect for truth within our education system, creating a legitimate ground for teachers being accorded respect as those who help mediate and prepare young people for their own engagement with acts of discovery. It also provides an antidote to the narcissistic tendencies in contemporary culture that relativize and trivialize truth, leading to a tolerance for 'fake news' and weakness to the effects of propaganda (Adolfsson 2018). Deep conceptual understanding allows knowers to recognize and contextualize what is being presented as true within a broader scheme of knowledge than that which they would otherwise encounter in ordinary life.

Why Knowledge Matters

Young's argument for a knowledge-based curriculum is fundamentally about truth (Young 2007; Young & Muller 2013). Commitment to discovery based on belief that there is something out there to know forms the epistemological ground for a subject-based curriculum and is consistent with a respect for the tradition and community that have preceded us in verifying current knowledge. This then provides students with the foundations for new discovery (*PK*) and protects education from political manipulation (Polanyi 1947).

The purpose of education, to quote Gelwick's interpretation of Polanyi's argument, is that individuals become, "Instruments of exploration in the universe. The acceptance of this responsibility is our most important choice" (1977, 136). It is this that should provide the grounds for a curriculum's aims, not something imposed through a political rationale linked to instrumental values. This is not incompatible with developing

techne and providing pupils with valuable experiences leading to *phronesis*, but those are seen as emerging from pedagogic decisions about how to help develop understanding and engagement with *episteme*, not as a substitute for it. Fundamental to 'powerful knowledge' is the conviction that 'the truth shall set you free,' a fallible and socially verified version of truth (Young 2013). It is towards these aims that Polanyi began his own journey of discovery in the realms of philosophy, motivated by a concern for personal freedom within democratic and moral values (*SFS*, 16-17).

Process and product models of curriculum are contested in relation to presuppositions concerning the aims, pedagogies, and systems of evaluation they imply. As we have seen, process curricula tend to be viewed as closer to Young's Future 2 model, product curricula closer to Future 1. Young's case for Future 3 is based on the view that neither of the alternatives adequately addresses the question of students' access to *episteme*. As such, even attempts to combine aspects of process and product models, such as in the new curriculums of Wales and British Columbia, fail to address the key issue of knowledge. Process models are often advocated as encouraging more child-centered approaches to education, product models are presented as defending the importance of transmitting knowledge and culture. As we have seen, when viewed in relation to the place of knowledge, neither model delivers education from the traps of instrumentalism nor do they grant significance to the personal knowledge that Polanyi considers fundamental for human progress. A curriculum structured around discipline-related subjects, coupled with learning environments within which mutual respect and openness are encouraged is more likely to promote the valuing of truth and commitment necessary to encourage future discoverers of knowledge. Without this we are unlikely to see any greater participation in life-long learning or capacity to resist political manipulation of information.

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