The Equal Status of Indigenous Knowledge and Scientific Knowledge in the Academic Curriculum: The Case from Mētis

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Abstract

This paper focuses on Elizabeth Anderson's application of the epistemological idiom of mētis to the debate over the equal status of indigenous knowledge and scientific knowledge in the academic curriculum. Against the denial of this equal status by critics of indigenous knowledge or science, Anderson defends what one might term a *conciliatory view*, the view, roughly, that indigenous knowledge meets the criteria of scientific knowledge presupposed by the critics of the equal status of indigenous knowledge and scientific knowledge in the academic curriculum, and it is continuous with agroecological form of mainstream scientific inquiry. I argue that the conciliatory view does not rest *substantively* on mētis as an epistemological idiom since the view is based on the direct conceptual relation between the notion of indigenous knowledge and the notion of scientific knowledge or inquiry. More importantly, the view amounts to appealing to the critics of the equal status of indigenous knowledge on the terms of those critics and leaves unchallenged those very core assumptions that ground their denial of the equal status of indigenous knowledge in the first place. Building on Anderson's fruitful analysis of mētis, I attempt a sketch of an alternative view that vindicates the equal status of indigenous knowledge and scientific knowledge in the academic curriculum, but which avoids those drawbacks.

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I. Introduction

Elizabeth Anderson's "Local Knowledge in Institutional Epistemology" (henceforth, Anderson, forthcoming) defends the value of local knowledge, and a specific form of it, mētis, in institutional epistemology,[2] and uses this to argue for: (1) the resistance to the proletarianization of the profession; (2) a proper appreciation of the value of affirmative action for members of historically marginalized groups; and (3) the recognition of the equal status of indigenous knowledge and scientific knowledge in the academic curriculum. By so doing, Anderson makes an underappreciated type of knowledge, mētis, center stage in institutional epistemology.

This paper focusses on Anderson's case for the recognition of the equal status of indigenous knowledge and scientific knowledge in the academic curriculum. Against the denial of this equal status by critics of indigenous knowledge or science, such as, Horsthemke (2008), Clements et al. (2021), and Dawkins (2021), Anderson (forthcoming) defends what one might term a *conciliatory view*, the view roughly that indigenous knowledge meets the criteria of scientific knowledge presupposed by the critics of the equal status of indigenous knowledge, and continuous with agroecological form of mainstream scientific inquiry. If I am right, even though Anderson sees indigenous knowledge as a form of mētis, the conciliatory view does not rest *substantively* on appealing to the idiom of mētis since those claims are based on the direct conceptual relation between the notion of indigenous knowledge and the notion of scientific knowledge or inquiry. More importantly, the view amounts to appealing to the critics of indigenous knowledge on the terms of those critics and leaves unchallenged

[2] She defines institutional epistemology as the epistemology concerned with the excellence and failings of institutions, both formal and informal, and the choice and design of the kind of arrangements needed to discover, correct, and transmit the information essential to addressing collective action problems (Anderson, forthcoming).

those core assumptions that ground their denial of the equal status of indigenous knowledge in the first place.

I suggest that the idiom of mētis, which Anderson makes center stage provides resources to engage with a different line of argument, which is decolonial in form and content. On the proposed view, the idiom of mētis allows us to reject the cosmo-vision by which powerful groups are able to marginalize less powerful groups and their knowledge systems and provides a straightforward rationale for crediting indigenous knowledge an equal status with scientific knowledge in the academic curriculum, one that amounts to a recentering of knowledge and the knowing process in localized spaces and bodies.

I proceed as follows. I begin with some stage-setting in section II, presenting and discussing Anderson's analysis of local knowledge and mētis. In section III, I critically engage Anderson's conciliatory view and show why a decolonial critique is needed in response to the critics of the equal status of indigenous knowledge and scientific knowledge in the academic curriculum. And in section IV, I attempt a sketch of an account that seeks to meet that aspiration and avoids the drawbacks of the conciliatory view.

II. Local Knowledge and Mētis in Political Economy and Institutional Epistemology

Anderson (forthcoming) defines local knowledge as "knowledge of particular persons, places, animals, and things, including artificial things such as particular instruments, buildings, organizations, and cultures" (p. 2). She also takes this knowledge to include the knowledge of the relationship that exists among organisms in a given ecosystem, or individuals in a given community. Local knowledge has a distinctive profile. It is particular not general, and thus, cannot be captured in rules, algorithm, etc. It is acquired through experience and direct acquittance with the object of knowledge. It is also illegible, that is, it demarcates a boundary of outsiders and insiders to it. And it is value-parochial, that is, what is known about it usually correlates with the interest and values of the relevant agent or

community who possesses it or seeks it as opposed to some universal interest or value it may have for everyone (Anderson, forthcoming).

Local knowledge contrasts with general or scientific knowledge whose object is general and abstract, such as, scientific laws and theories, and causal powers and dispositions of social entities (money, corporations) and natural artifacts (stars, DNA). General or scientific knowledge can be fully articulated in propositions and thus, legible to outsiders. It is also value-neutral, that is, its representation of objects is in abstraction from any specific human value or interest.

She argues that at least since Plato, philosophy has been about the search for general or scientific knowledge, that is, knowledge of principles that are true in all possible worlds. Anderson is right. For example, George Bealer, a prominent theorist of philosophical methodology in the analytic tradition argues that when philosophers investigate items such as substance, mind, intelligence, consciousness, perception, knowledge, goodness, duty, virtues, and so on, what they seek are answers that have three features—universality, generality, and necessity:

> The questions of philosophy are universal in the sense that, regardless of the biological, psychological, sociological, or historical context, they (and their answers) would be of significant interest to most any philosopher, *qua* philosopher (at least once they had been introduced to the underlying concepts and their basic relations to one another). These questions are general in the sense that they—and their answers—do not pertain to this or that individual, species, or historical event. Typically, the central questions of philosophy—and their answers—are phrased in quite general terms without mention of particular individuals, species, and so forth. These questions are necessary in the sense that they call for answers that hold necessarily... It is not enough that the virtue of piety happened to be what Euthyphro exhibited: a philosopher wants to know what piety must be (Bealer, 1998, pp. 203-204; see also Goldman & Pust, 1998; Pust, 2000; Sosa, 2007).

The problem this view of philosophy raises is whether our methods (intuitions, thought experiments, etc.) are suited for the discovery of the features of those items that meet these conditions. Many worry that they do not, which lends support to skepticism about the prospect of philosophical knowledge (Baz, 2016, 2017, 2023; Cummins, 1998; Knobe & Nichols, 2007; Machery, 2017; Weinberg, 2007).

Anderson is interested in a particular kind of local knowledge and its applicability in institutional epistemology, namely, mētis, identified and discussed by Scott (2020) in political economy. As she explains it, mētis is the practical expertise one has as a result of dealing with some particular object, individual, animal or environment, and stands in contrast to technē, which is "general impersonal propositional knowledge valid across space and time" (Anderson, forthcoming, p.11). Both are remarkably distinct in their *modus operandi*. While technē works by isolating and investigating one variable or feature at a time while holding other "intervening" ones constant (e.g., in engineering and agronomy), mētis works by attunement to the object (individual, place, animal, environment, and so on) or to the situation, and being able to spontaneously respond on the basis of one's experience to subtle features of the object or multiple variables in the given situation. It comes as no surprise, therefore, that the paradigm examples of the expressions of mētis include peasant agricultural practices, linguistic production and understanding, and artistic and athletic performances (Anderson, forthcoming).

III. Applying the Idiom of Mētis to the Indigenous Knowledge Debate: (a) The Conciliatory View

Anderson applies her analysis of the idiom of mētis to several debates in institutional epistemology. Here, I focus on her application of the idiom to the public debate generated by the New Zealand government's proposal in 2020 to grant "equal status for mātauranga Māori" (Māori knowledge) in the academic curriculum so as to enhance the performance of Māori students in secondary school education. The critics of the proposal, made up of leading figures in the scientific and philosophical

communities in New Zealand and beyond, argue that it is a bad idea. Clements et al. (2021) argue that although indigenous knowledge has some value, it falls below what counts as science "in the discovery of empirical, universal truth." Another critic, Dawkins (2021), claims that incorporating Māori "ways of knowing" into the science curriculum amounts to teaching myths as scientific knowledge. "Science classes," he says, "are emphatically not the right place to teach scientific falsehoods alongside true science" (Dawkins, 2021). Continuing the line of thought, he claims that "science is science is science, and it doesn't matter who does it, or where, or what "tradition" they may have been brought up in. True science is evidence-based not tradition-based…." This negative attitude to the idea of indigenous science or knowledge and its place in the academic curriculum finds sympathy elsewhere too. For example, Anderson (forthcoming) cites Horsthemke (2008) who argues that if "indigenous science" is science and thus based on "truth and scientific evidence" it is not "indigenous," and if it is "indigenous" it may refer to practical knowledge or skills but not scientific knowledge (Horsthemke, 2008, p. 341).

Against this backdrop, Anderson (forthcoming) defends what might be termed a conciliatory view, in two steps. First, she identifies some criteria of scientific knowledge held by the aforementioned critics and shows that indigenous knowledge meets those very criteria. These criteria are that scientific knowledge are based on careful empirical observation, open to correction and refinement based on further observation, and generative of new empirically based knowledge, whether theoretical or practical (Anderson, forthcoming, p. 29). Citing the case of the restoration of native lake sturgeon in the Manistee River in Michigan by the Little River Band of Ottawa Indians, she argues that the knowledge of indigenous people in fishing but also in hunting and farming and the like, as an expression of mētis, meets those criteria because they involve "fine-grained observation of numerous variables in the environment, and regular adjustment and refinement of beliefs and methods in light of such observations, leading to successful adaptation to changing circumstances" (Anderson,

forthcoming, p. 30). Further, she observes that since science is a pursuit of significant truth (Anderson, 1995), and what is significant is based on the idiosyncratic interest of those involved, there is nothing incoherent in the idea of science that is local or indigenous, contra Dawkins (2021) and Horsthemke (2008). And second, but relatedly, she draws from Lacey (2005, 2013) to show that indigenous knowledge or science is an instance of a form of mainstream scientific inquiry, namely, agroecology, which valorizes "popular participation" in inquiry, and promotes values of sustainability, functional biodiversity, local community empowerment, poverty reduction, cultural identities, and solidarity and welfare of community members.

One worry with this defense of the equal status of indigenous knowledge and scientific knowledge in the academic curriculum, however, is that even though Anderson recognizes indigenous knowledge as a form of mētis, the defense does not rest *substantively* on mētis as an epistemological idiom since those claims are based on the direct conceptual relation between the notion of indigenous knowledge and the notion of scientific knowledge or inquiry. A second worry is that in beginning from a set of assumptions of what counts as scientific knowledge or inquiry gleaned from mainstream scientific practice or conceptions of scientific practice held by the critics, the defense has the unintended consequence of making that form of science universal to which other forms of science has to appeal to in order to gain legitimacy, which in turn feeds into the unjust hierarchy that have marginalized indigenous people and their knowledge system. A third worry is that the defense amounts to appealing to the critics of indigenous knowledge on the terms of those critics and leaves unchallenged those core assumptions that ground their denial of the equal status of indigenous knowledge and scientific knowledge in the academic curriculum. This makes the defense rests on very shaky grounds since in leaving those assumptions unchallenged, they are bound to dispose the critics and those sympathetic to their position to deny that indigenous knowledge counts as scientific knowledge, or as one of the critics puts it "It is not science—we stand by that" (Anderson,

forthcoming, pp. 27-28; Dunlop, 2021). Ocean Mercier, commenting on the argument(s) of the critics against the proposed equal status of indigenous knowledge and scientific knowledge by the government of New Zealand makes a similar point when she says that:

> This is a very old argument actually that is coming from scientists who are very deeply steeped in a particular set of scientific norms that go back a long way and they have their roots in colonialism…I think if there is one thing this particular incident reminds us off is that there is need to decolonize first, to decolonize the science systems before we can create a safe space for mātauranga and indigenous knowledge, this is a reminder that this space is not completely safe (Dunlop, 2021).

I agree. Therefore, what I seek to do in the next section is to attempt a sketch of an account that meets this decolonial aspiration, and which also avoids the worries raised above.

IV. Applying the Idiom of Mētis to the Indigenous Knowledge Debate: (b) A Decolonial Alternative

I claim that the epistemological idiom of mētis gives us resources to engage in decolonization, understood here as two complimentary processes. The first involves the rejection of the set of assumptions about knowledge and the knowing subject that have been part of the cosmo-vision used to perpetuate patterns of domination by powerful groups over marginal groups and their knowledge systems, in particular, the assumption about the knowing subject as dislocated, disembodied, and ungrounded in no particularity of place, community, history, culture, and tradition. The second involves the re-centering of knowledge and the knowing process in localized spaces and bodies. A decolonization that assumes these double mandates is often referred to as epistemic or epistemological decolonization (Grosfoguel, 2007; Mitova, 2020, 2023; Quijano, 2007).

How does the idiom of mētis enable us to realize these mandates? It does so by providing the counterscript, first, to reject the identification of science with the notion of an inquiry in pursuit

of general and universal truths only, and the idea that science is science is science, pure and simple, not "European," not "White," not tradition based, but merely evidence-based (Clements et al., 2021; Dawkins, 2021; Horsthemke, 2008); second, to reject the hegemony of the propositional view of knowledge, the view that one knows, including in scientific contexts, if and only if one has true belief supported by the evidence, where evidence amounts to reasons the knower is in a position to articulate (Horsthemke, 2008)[3]; and third, to reject the view that incorporating indigenous science or indigenous "ways of knowing" into the science curriculum would amount to incorporating myths, superstitions, falsehoods, or divination into the science curriculum (Dawkins, 2021; Horsthemke, 2008). That is not all. The idiom of mētis also provides a straightforward rationale for crediting indigenous knowledge an equal status with scientific knowledge in the academic curriculum, one that amounts to a recentering of knowledge and the knowing process in localized spaces and bodies, and thus realizes the second mandate in epistemic decolonization.

Let us take each in turn. Mētis and the form of knowledge that it valorizes among experts, including in the sciences, and the central value of this form of knowledge and skills not just for the success of individual scientists but for the attainment of the collective goal of science—advancing knowledge and understanding of the world—shows that the equation of the image of science with technoscience and the search for universal laws and truths is ill-founded. For example, Dawkins (2021) equates science with a set of universal algorithm that presumably anyone can follow—the use of peer review, repeated experimental testing, the use of instruments to support fallible senses, and so

[3] Although at first glance, the account is presented as a sufficient condition for knowing, a closer reading of Horsthemke (2008) reveals that the target analysis posits a necessary condition for knowing as well, for she says "I consider the present analysis of science and scientific knowledge to be not only plausible but also indispensable for clearing up some of the confusions in debates around indigenous science. In other words, this account of the character of science and scientific knowledge may be used as a yardstick" (p.345). That is, used as a yardstick to judge when someone can be credited with knowing a given proposition.

on. So too does Horsthemke (2008), who though recognizes the place of practical knowledge and skills in science (and thus, mētis), still goes ahead to equate science and scientific knowledge with its most general aspects such as laws, regularities, observation, description, explanation, prediction and testable hypothesis (p. 341). Why should science be identified with a marginal aspects of its method and practice? Moreover, knowledge of such method and processes is quite compatible with the utter inability to engage in anything usefully called "scientific inquiry." One suspects that part of the reason why this image dominates the imaginary is because it is rooted in a certain claim of social power and the intellectual reflex that sustains it, such as the tendency to think of every other form of knowledge, and those who have them as answerable to its claim and standard. As Semali and Kincheloe (2002) rightly noted "Culture A certainly gains an element of domination over Cultures B and C, if it can represent its knowledge as transcendent truth and Cultures B and C's knowledge as a "superstition"(p.18). This is also what problematizes the idea that science is science, pure and simple, not tradition-based but merely evidence-based. Indeed, it is worth noting in this regard that even to normally pose questions within scientific inquiry, and to seek to answer such questions, and to see what counts as salient evidence or counter-evidence in the process presupposes a historically mediated tradition and practice (Kuhn, 1962).

The assumption or view that one knows if and only if one has true belief that is well supported by the evidence is not uncontentious in analytic epistemology (see Shope, 2017), although it is one that Horsthemke (2008) relies on to demarcate what counts as scientific knowledge and what does not count as scientific knowledge. Based on that theoretical presupposition she says that "If something is referred to as 'indigenous scientific knowledge' in the sense of factual or declarative knowledge, it must meet the requisite criteria: belief, evidential adequacy and truth. If it does, it is relevantly similar and, indeed, equal to 'non- indigenous' knowledge in a particular area or field" (p. 343). What I wish to draw attention to here is that the view makes propositional knowledge (and evidence) the only kind

of knowledge (and evidence) that counts in attributing scientific knowledge. I have two reactions to this position. First, scientists know a lot of stuff much of which they are not able to back up with fully articulable reasons. Second, and more importantly, mētis allows us to see the narrowness of that view of knowledge (and evidence) since the knowledge that mētis makes salient are not propositional. And yet, they are most central to scientific progress, if anything is.

Consider next the view that incorporating indigenous science or indigenous "ways of knowing" into the academic curriculum would amount to incorporating myths, superstitions, falsehoods, or divination into the academic curricula. The view raises the question, how should we think of indigenous science or indigenous "ways of knowing"? Is it equivalent to myth, superstition, falsehoods, magic, or divination? Again, the idiom of mētis clarifies what indigenous science or indigenous ways of knowing is. And here my claim is that mētis is not just a kind of knowledge, it is also a way of knowing. More precisely, the epistemology of mētis is the epistemology of skills, where this is a capacity to know the requirements of reason across various kinds of domains, practical, moral, and epistemic (where the epistemic includes activities like judging, inferring, asserting that something is the case, etc.) as a result of long familiarity and experience with a particular situation, environment, or object. Such familiarity and experience imbue agents with a "feel" of the subtle features of the situation, environment, or object. Indigenous science is just a special manifestation of this capacity. And there, it is deeply connected to one's relationship to the ancestral land, rooted in an intergenerational orientation to the world, and seamlessly bound to every department of the life of indigenous people (Maurial, 2002). Seen this way, there is nothing mysterious or superstitious or magical about indigenous science and indigenous ways of knowing. And we do not need to anchor scientific knowledge to any particular theory of knowledge to rule out belief in witchcraft, belief in the "tokoloshe" or "mantindane," namely, that sex with a virgin prevents or cures HIV/AIDS, and to exclude practices such as divination, soothsaying, and the likes (Horsthemke, 2008, p. 342) from

the academic curriculum. We rule them out by simply noting that these are not forms of mētis because they are not manifestations of skills and experience dealing with aspects of the natural world, but ways of avoiding the long haul of quotidian history and experience essential to the acquisition of mētis. Indeed, we should think of these beliefs and practices like we think of discredited theories in mainstream science like phlogiston theory, which purports to be a genuine scientific theory, but it is not.

Finally, indigenous knowledge/science ought to enjoy equal status in the academy along with mainstream scientific knowledge because there is a valid and useful sense in which both are expressions of mētis because they are grounded in knowledge and experience of particular object, environment, or situation, open to the correction and feedback of other members of the community, rooted in an inherited tradition, and responsive to the interests, problems, and questions that are picked out as salient by members of those particular communities. Such a view also amounts to recentering knowledge and the knowing process in localized spaces and bodies.

V. Concluding Remarks

Elizabeth Anderson's valorization of local knowledge and mētis is both timely and innovative. It provides the tools to resist some negative orientations in the profession and in the academy. I have focused here on her application of the epistemological idiom of mētis to the debate over the equal status of indigenous knowledge and scientific knowledge in the academic curriculum and sketched an alternative way of engaging with that application, one that sees this idiom as a useful ally in decolonization. That said, the usefulness of this idiom clearly goes beyond these debates and domains. It applies, for example, to the epistemology of philosophy. But that is a topic for a different project.

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