

307. Indigenizing Science

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Universities in Canada are encouraging departments and professors to bring indigenous lore, indigenous methods of investigation, and indigenous local knowledge into their classes and research. They want even professors of the hard sciences—physics and chemistry, but especially biology—to expand their horizons to include the ways and results of traditional Native American inquiry.

There's a good reason to resist current initiatives to indigenize science and there's a bad reason. The bad reason is that indigenous science isn't science. The good reason is that indigenization initiatives are about inclusion, celebration and social justice, not inquiry.

First, the bad reason.

Science, we're told, eschews supernatural entities and paranormal forces. It recognizes only physical objects and physical forces. Science explains what happens by citing causes that push, never ones that pull, and it presupposes that any event in space and time that involves mass had a cause in space and time that also involved mass. Indigenous lore about nature, though, so we're told, posits spirits and occult forces. Sometimes, according to indigenous lore, physical things move but not because some other physical thing moved first.

Science, we're told, prizes observation and seeks to gain telling results by conducting experiments. Its concern is with public events and states of affairs, things we can all perceive and experience. It searches for generalizations and laws and brutally expels any theory the predictions of which cannot be reliably repeated. Indigenous lore, by contrast, is often personal and private. Not everyone can see what the shaman sees, and exceptional occurrences are treasured and interpreted, not discarded as measuring errors, artifacts of the apparatus or figments of imagination. General and statistical claims can be validated or refuted not by double-blind experiments but by a single deliverance of authentic lived indigenous experience.

What gets handed down in science are not theories, but questions, the current problem situation and techniques of inquiry. In science, theories and explanations are open to modification and rejection. Though a scientist might come from any culture, his or her cultural heritage is no part of scientific culture. The scientist is an authority not because of inheritance but because of publicly recognizable accomplishments. What gets handed down in indigenous lore, though, is simply the lore itself. Lore is not modified or rejected, at least not intentionally, just added to, if that. The shaman's authority proceeds from his blood or heritage or age.

The method of science is inductive or Bayesian or hypothetical-deductive or conjectures and refutations. There are no methods of indigenous lore, just tradition and inspiration. Scientists

argue over method and disdain results and theories got from methods they reject. Indigenous ways of knowing want to have secure seats at the table and then just for everyone to get along.

Those who support initiatives to indigenize science are rightly critical of these oppositions. If we look carefully, they say, we will see that science isn't quite as materialist or empirical as its publicists tell us, while indigenous lore is often about stuff we can see, smell or kick. It's real science, the critics tease, when it's a parallel universe interfering for a nanosecond with ours but not when it's a spirit momentarily directing a thought? How arbitrary is that! Science has a priesthood and deals in esoteric relations while creators and practitioners of indigenous lore speak openly and publicly train newcomers. And no one really knows what the method of science is or science has innumerable credible methods, and that makes it just like shamanism.

These criticisms of the thesis that science is clearly one thing and nothing else is like it are powerful—even though not, ultimately, conclusive. Nonetheless, there is much to be said for the rejoinder that though we shouldn't exaggerate the differences between institutional science and other proffered ways of investigating and knowing, neither should we minimize them. But I am happy to set aside what might be caricatures.

The danger in trying to separate science from non-science is that one can easily mistake features characteristic of institutions of science for the scientific endeavour itself. The endeavour is to try to figure things out, to gain insight into the ways of the world. The question what is necessary or useful to that endeavour is itself an object for scientific investigation. Answers to that question are themselves to be criticized and tested severely and rigorously. Ruling out an answer to the question how best to figure things out on the grounds that it doesn't conform to the answer currently institutionalized in universities is no different than ruling out a proposed theory on the grounds that it isn't the theory already in place.

In the history of science, as in the history of everything else, excitement and discovery frequently comes from clashes. Two ideas, theories or traditions in science run up against each other, sparks fly, and new and better ideas or theories arise. The steady-state tradition in science and the catastrophist tradition are as unlike each other as any piece of science and any bit of indigenous lore could be, and yet their interplay over the last two centuries, in physics, astronomy, cosmology, evolutionary biology, and geology (and climatology?), has produced profound theories and discoveries. The interplay between materialism (matter but no forces) and physicalism (matter plus forces) has also been fecund.

There is no reason to hold that confronting theories and methods within respectable science with indigenous lore and ways of knowing won't also generate new and valuable ideas and approaches. If there are presently barriers preventing communication and confrontation between people working in different traditions, scientific or indigenous, let us seek to remove them. Have scientists study and learn with shamans and knowledge-keepers and have the latter study and learn with the former. Be sure that each is free to be critical (and even dismissive) of the other. The target, after all, is the understanding of the world, not (not only) the understanding of each other in each other's own terms.

If something that could be called indigenization is to happen in the universities, then, it must first of all proceed from the felt need by researchers already within the university to try on ideas from elsewhere and to experiment with methods from other traditions. The engagement must come from the professors, not the administrators, the boards of governors or the faculty unions, and it must answer to the projects and concerns of the professors.

It must, second, and most importantly, be a critical engagement. University people must be free to say what they want about any supposed ways of knowing that present themselves. They must be free to be ruthlessly and publicly critical. And after being ruthlessly critical, university people must be free to be dismissive and they must retain the power to dismiss. If a project begun hopefully and with curiosity eventually fails, fails in the eyes of the university people involved in it, they must be free to push it away.

Indigenization, though, is most often promoted on grounds of equity, diversity and inclusion, or on grounds of justice. Indigenous culture is an equity-deserving culture; as well, creating space for indigenous culture within the university increases the number and variety of cultures to which professors and students would have access. Indigenous people, as indigenous people (that is, as representatives or embodiments of indigenous culture), should be provided a space and their indigenous cultures celebrated. These arguments for indigenizing the university, including science, popular though they are with EDI officers and academic administrators keen on EDI, have nothing to do with academic values or academic culture.

To trade the academic culture of criticism and disputation for a culture of celebration of identity would be the ruin of the university. That is why current indigenization initiatives are to be resisted.

Now, whether we should continue to have universities is a question we might want to ask. Perhaps they have outlived their usefulness to society and to the people who pay for them, or perhaps they are unjust institutions, embodying values at odds with current communitarian values and aspirations. That EDI will ruin universities is the point of EDI, we will learn should we listen closely enough to its defenders.

An objection to my proposal that indigenous lore and indigenous ways of knowing come into the university only by invitation of the professors, and then earn their stay through competing successfully for the hearts and minds of scientists and scholars, is that without an original sinecure, they don't stand a chance. The competition simply won't be fair. The interests and entrenched conservatism of the professors can be overcome only through firm direction and subsidy. (Once the playing field is level for all, the subsidies can be removed.) Thus, it is for administrators or faculty associations to lead indigenization efforts and to divert resources to support those initiatives. That science will be compromised while things get sorted out is a price worth paying; and soon enough it will prosper again.

It won't work. The silos that will need to be created and the rules against criticism (presented as rules to promote or ensure respect and civility, of course) will destroy the integrity of the university as a place of critical inquiry. Scientific inquiry will be lost as a university endeavour.

So let indigenous spiritualist traditions and scientific materialist traditions go up against each other, just as various scientific traditions already do, and let us through critical discussion of their clashes see what we might learn about the world. But to preserve the university, the professors, and not the administrators, have to be the ones who bring about the engagement, and we cannot let the critical ethos of the university collegium and community be compromised by any indigenization initiative, not even for the sake of social justice.