Western Faculty Profile:

Dr. Maxwell J Smith

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No conflicts of interest declared

On November 26th, 2018, one day before the Second International Summit on Human Genome Editing, shocking revelations emerged regarding the birth of the world’s first CRISPR babies. Initially hailed by the People’s Daily Online as a “Chinese scientific breakthrough”, ensuing international outcry has prompted investigations regarding the regulatory and legal dubiousness of the said experiment. During the CRISPR baby debate, some of the most refreshing propositions were offered by bioethicist and healthcare policy scholars: the former are concerned with the experiment’s ethical consequences, the latter are interested in the policy solution to ensure adequate regulatory oversight. This edition of the Faculty Profile features Dr. Maxwell J Smith, an assistant professor at the School of Health Studies and the co-director of the Health Ethics, Law, & Policy (HELP) Lab, who shares his insight into these exciting disciplines.

Dr. Smith’s academic journey started with his exposure to a philosophy course in high school, a course that is not frequently offered at the secondary level. “There was something that really piqued my interest,” said Smith, “so I decided to continue studying it at university.” When Dr. Smith was finishing his undergraduate studies in philosophy, applied ethics seemed to be the area with the greatest job prospects, especially in the healthcare setting, so after undergrad Dr. Smith pursued a master’s degree in bioethics. “During that degree I researched the ethical issues surrounding the reduction of multifetal pregnancies,” explained Smith, “[the act of reducing a pregnancy from], say, triplets to twins in order to increase the odds of a healthy live birth.”

At the beginning of his master’s degree, in 2009, Canada was experiencing the H1N1 influenza pandemic, not long after the 2002-2003 SARS crisis. “I [originally] hoped to become a clinical ethicist and advise clinicians and patients on ethical issues arising in the clinical setting [after finishing my master’s degree]. I was in Toronto at that time, and there were lots of ethical issues surrounding [the pandemic], such as forced quarantine, setting priorities for the allocation of scarce resources, or whether health care practitioners have a duty to work during the pandemic. Researching these issues motivated me to pursue a PhD in public health ethics.” Dr. Smith points out that public health is distinct from health care because it typically involves collective actions taken to protect or improve health, and so as a result, he received considerable training in health policy and law in order to be in a better position to holistically study public health. After receiving his doctorate, Dr. Smith was a Banting Postdoctoral Fellow at the Institute for Health and Social Policy at McGill before joining the Faculty here at Western.

Through an ethical lens, Dr. Smith’s research touches on a wide range of issues associated with modern biomedicine and its underlying policies. “I have conducted research on the ethics surrounding organ donation after patients are declared dead according to cardiocirculatory criteria of death – as opposed to neurological criteria of death explained Dr. Smith, “which raises some ethical questions, such as whether such donors can still experience pain.” Dr. Smith also focuses on reproductive health and does empirical works related to global health policy of infectious disease control. He provides an example: “what is the WHO’s role during an Ebola outbreak in West Africa, and what policies can [the international community] implement so that we respond to these [crises] in a way that is socially just, that the burden doesn’t only fall on these countries with underperforming health systems?” A lot of Dr. Smith’s work focuses on the topics of social justice and health justice. “Nearly every health organization indicates that social justice and equity are central values to their mandate, and so given my philosophical background, I have focused on attempting to bridge these theoretical ideas with healthcare practice,” said Dr. Smith, “[I am trying to help healthcare organizations figure out] what do these values actually look like in a practice or policy setting, rather than just saying these nice things that we can all agree on – to actually put some meat on the bones.”

The modern healthcare paradigm is constantly being shifted by technological advances, and in bioethics there is no exception. One example is the use of Extracorporeal Membrane Oxygenation (ECMO) when organs are transplanted following circulatory death, which uses a pump that removes blood from the body, oxygenates and removes carbon dioxide from that blood, and then returns the blood to the body1. “We call these morally-disruptive technologies,” said Dr. Smith, “if you are declared ‘dead’ according to cardiocirculatory criteria, and we re-perfuse you [with ECMO] to ensure we can still transplant your organs in a successful manner, in some cases we will insert occlusion balloon catheters into your thoracic aorta to ensure we do not restore circulation to the brain, which carries the remote possibility that patients regain consciousness or experience harm.” Dr. Smith
explains further, “but the very fact that we are putting in these occlusion balloon catheters perhaps indicates that we have some skepticism as to whether people [who are declared dead according to cardiocirculatory criteria] are truly free from experiencing pain. Death is a tricky concept to pin down, but our main concern ought to be to make sure that you are unharmed.”

More recently, Dr. Smith’s focus has been on the ethics of artificial intelligence (AI) and health. “The more we implement AI into clinical decision making, more ethical issues emerge, [such as] whether the machine-learning software we use is proprietary [after it is fed with medical data] and not available for audit.”

Besides being an academic, Dr. Smith continues to work as a consulting clinical ethicist, an important role that isn’t as well known to the public as other members of the healthcare team such as physicians, nurses, or social workers. “In my clinical role, when I was not being consulted, I would go to rounds about once a week with a particular department’s team to identify places where we can initiate preventive ethics,” said Smith, “[I think about] what are the things that we can do now that can prevent ethical dilemmas from emerging? For example, if there is discussion about surgically inserting a G-tube (Gastrostomy Tube) into a terminally ill patient, would that cause more suffering?” Like other specialists, clinical ethicists can also be called in to consult on various cases related to ethical decision-making. “[Unlike physicians], my role isn’t to decide whether or not to insert a G-tube or intubate a patient, for example. Instead, I advise the care team, speak to the patients and their families and identify their goals and values that emerge in the context of their decision-making. Sometimes there are values that are not explicit, so by just putting them on the table, like religious values, cultural values, we are able to identify where values align and come up with an ethically-justified decision about how to move forward.”

As a teacher, Dr. Smith has some advice for aspiring scientists and health professionals. “Students will receive some training in ethics as part of their education, but a lot of the time my experience has been that [young professionals] tend not to appreciate the importance of engaging in practice until much later in their career” observed Dr. Smith, “in my experience, the more senior physicians and nurses will tell you that 99% of their practice is ripe with ethical values and decision-making.” On the education system, Dr. Smith has some recommendations. “It would be great if everyone, even before coming to university, were to take a philosophy of science class,” said Dr. Smith, “the idea is that, in this era of fake news, people usually question where truth lies or whether truth is even possible, so we need to have a discussion about what it even means for a statement to have truth value. That is what philosophy of science can help to clarify.” Part of Dr. Smith’s undergraduate teaching involves engaging health sciences students, who are largely trained to think according to the scientific method. Dr. Smith emphasizes the appreciation of the value dimensions surrounding various intellectual pursuits, even and especially when conducting research in an empirical and objective manner. “The very research questions that we ask are motivated by values,” said Dr. Smith, “the very reason that we are even able to ask these questions is because of the settings we are in, which are influenced by priority of funding models, which is of course heavily based on values.”

Research funding has been steadily declining in recent years. For aspiring students going into academia, Dr. Smith has some advice. “We can think about [finding funding] instrumentally in the sense that, yes, there are important questions I am asking in my work, but we need to make sure the funders see the value in my [research topics],” explains Smith, “it’s about highlighting how the research at hand aligns with the [funder’s] priorities. One way I do that is by pointing to organizational mission statements: look, ethics and health equity are what you purportedly care about, so you should fund this type of research.” For Dr. Smith, there is an intrinsic reason as well. “Health ethics and health equity are incredibly important, so obviously we need to understand these concepts and values better.” In addition, Dr. Smith also recommends looking beyond the traditional sources of funding of the tri-council. “There are also private foundations and contract models, so broadening the scope of your funding is also important.” Recognizing the shifting funding paradigm towards private-public partnership to facilitate translation and commercialization, Dr. Smith cautions, “we still need to recognize and prioritize [those fundamental research questions] that don’t necessarily have commercial outcomes in the short term, but which might lead to many discoveries or applications in the long run.”

For those students who are pondering about graduate studies, Dr. Smith points out that defending and completing one’s PhD thesis can be both highly stressful but also immensely rewarding. “There are not many opportunities where you put your heart and soul into a piece of work, writing hundreds of pages on a given topic, and having not only your mentor but also external reviewers grill you on it for a couple of hours,” Dr. Smith smiles, “they picked [your thesis] apart and see if there’s any merit to it – but this is all done in order to advance you as a scholar.” From the day students enter graduate work, the thesis is constantly at the back of their mind, “the stress of it can often lead to attrition, which is why it’s also important to take care of your well-being. But [the toughness] can also be why successfully defending your thesis can be one of the most rewarding moment of your life.”

To learn more on Dr. Smith’s lab and research, please visit their website:

https://www.uwo.ca/fhs/shs/about/faculty/smith_m.html

References


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