

Supplementary File A: Discussion of positionality

Article title: *Mining, Colonial Legacies and Neoliberalism: A political ecology of health knowledge*

This file contains information provided by the paper's authors concerning positionality, or our respective relationships to the paper's topic and how this may affect our interpretation of the data. It is arranged in the same order as the paper's authorship. It was collected using forms for declarations of competing interest, but – consistent with the article's framework and methods – is not intended to be a confession of 'bias'. Rather, it acknowledges the fact that no 'objective' position outside of society exists from which to study it, and that stronger forms of objectivity would take the social location of the observer into account.

Ben Brisbois received his PhD from the University of British Columbia (UBC) and carried out postdoctoral research at the University of Toronto, two universities that have been heavily sponsored by Canada's mining industry. Friendships with mining justice activists in these two settings, and with the North and Latin American members of Frente Colibrí, helped motivate the activist and analytic activities described in the paper. He has also participated in activities of the Canadian Community of Practice in Ecosystem Approaches to Health (CoPEH-CAN), funded by Canada's International Development Research Centre (IDRC). This involvement in CoPEH-CAN is the source of friendships and collegial relationships that informed both the content of the paper, as well as a writing process that involved considerable effort to avoid unfair characterizations of the work of colleagues.

Ben's decision to lead development of the article was shaped as well by experiences as a white settler Canadian attempting to understand and address inequitable colonial legacies, especially related to Canada's role in Latin America and the global South more generally. Additional aspects of Ben's social location shaping his relationship to the topic include experience as a funded participant in the Canadian Coalition for Global Health Research's (CCGHR) 7th Summer Institute in Quito, Ecuador in 2010; doctoral training supervised by the past (founding) president of CCGHR; and contract employment with CCGHR in 2014, 2015 and 2019. This involvement with CCGHR led to both collegial relationships and a sense of responsibility in relation to that organization's overall direction and relationships with external organizations and Canada's foreign policy. Results include development of a 2015 letter expressing concern over CCGHR's involvement with the Canadian International Resources and Development Institute (CIRDI), subsequent research activities (including the present analysis), and efforts to preserve collegial relationships while undertaking critical activism-focused scholarship. Finally, Ben's training in public health has been extensively complemented through engagement with critical social science approaches, shaping the paper's theoretical framework.

Mathieu Feagan: Briefly, in 2015 I invited a group of 10 scholar-activists (later known as Frente Colibrí) to come with me to Medellín (Colombia) to participate in a workshop on the role of academics and activists in confronting the health and environmental effects of Canadian mining companies (along with other multinational companies, especially in agribusiness) in Latin America, while also attending the 9e Congreso Internacional de Salud Pública hosted at the Universidad de Antioquia. One of the articulations that emerged from our conversations during this multi-day workshop was later captured like this:

"The political ecology of knowledge helps explain how the structural bases of social inequity and ecological destruction can remain intact, even while the leaders and new experts adopt the language of social justice and sustainability. Alternatively, we propose that a political ecology of knowledge framework helps to broaden the context in which academics see their roles in changing policy and practice, beyond the confines of cutting-edge niche research projects, toward an intervention in the bottom-up and top-down power relations that define the relationship between university-government-corporate alliances and social-ecological movements."

You can read more about the activities and reflections that led to Frente Colibrí here:

<https://antipodeonline.org/201415-recipients-2/iwa-1415-feagan/> . The initiative was financially supported by two groups: Canada's International Development Research Centre's EkoSante program and the UK's Antipode Foundation's International Workshop Award. At the time, I was a postdoctoral researcher at the University of Toronto's Department of Leadership, Higher and Adult Education.

All of this was a precursor to the present article (along with the other contexts described by my co-authors), and since our authorship team (which includes members of Frente Colibrí as well as many others) has decided to use this form to reflect on how our positionality shapes our interpretation of the data -- in short, our analysis -- I would simply like to re-emphasize that none of us is ever not located somewhere and, furthermore, our location necessarily shapes our analysis. Acknowledging this as both a strength and limitation is a necessary part of working realistically with objectivity. Typically, the whole set of contexts and processes that produce our social location (class, gender, race, etc.) are disregarded or hidden when it comes to the criteria for objective analysis (for example in many scientific publications). By contrast, in the present

article (and in this supplementary material in particular) we have decided to name some of the most relevant contexts that have shaped our views. Since we are a large authorship team, with people with many different locations with respect to the case study at hand, such transparency can only enhance the objectivity of our analysis. This does not render it objective in some final sense, as we cannot discount the possibility that there may be additional perspectives that might call into question our analysis, but the process we have followed considerably limits that possibility by being more inclusive from the outset.

Our larger point in using a political ecology of knowledge framework is to suggest that reflecting on the process and contexts upon which the authority of our expertise in part rests, remains central to any analysis that hopes to understand (and work towards superseding) its given positionality. Since there is no "God trick" (a view from nowhere), any serious analysis aiming for greater objectivity must seek to understand the dominant conditions that have given rise to its present claims, while also gesturing toward the possibilities for other conditions (and insights) to be brought forth -- this is not a rejection of objectivity by any means, on the contrary it is an acknowledgment of how the objective conditions make up a real material force shaping data collection and analysis. In writing this from my present location as a Lecturer at the School for the Future of Innovation in the College of Global Futures at Arizona State University, I cannot help but think that a political ecology of knowledge framework as applied to health knowledge production would go a long way toward understanding and intervening in the present COVID-19 pandemic.

Bjorn Stime is a white settler male whose position at the peak of most layers of privilege affords him the ability and responsibility to work on challenging the systems through which the privilege

is upheld. Able-bodied and confident in his own and his family's physical ability to acquire food from the region he occupies, Bjorn is confident that in a worst-case employment scenario he would continue to be able to provide sufficiently for his family. From this security, Bjorn tends not to self-censor or to avoid voicing perspectives that might potentially inadvertently cut off social and economic opportunities within a settler-dominated Canadian society (particularly within the settler-dominated Global Health and Public Health professional academic contexts). In this way, Bjorn perceives himself to not shy away from certain topics that are often subtly reinforced as being off-limit topics. These off-limit topics include 'explicitly challenging settler land entitlement' and 'pointing out the conflicted interests of the benevolence narrative entrenched in settler Canadian health care as we justify our ongoing domination as presumably superior to indigenous health care.' This grappling with his privilege, and with a sensed imperative to contribute to dismantling it, affects Bjorn's perspective.

Safe and secure in Canada (and beyond) as a white settler male, Bjorn's 'legitimacy' and entitlement to a future and to a status of dignity on the stolen land in Canada has never been in question. Bjorn aims to act, as a doctoral candidate at the University of British Columbia (UBC), with the corresponding ethical responsibility. He senses that responsibility to be, in his current context, to hone in on identifying and highlighting the difficult but achievable actions that settler Canadian global health professionals can take. Such actions would square with the history of settler land theft and with the way that global health professionals came to hold the authority that we do within the settler state of Canada.

Bjorn has engaged as a concerned student in challenging the UBC's and CIRDI's administrations on their roles in advancing colonial practices through facilitating resource extraction projects in contradiction to the refused consent of Indigenous Peoples within Canada

and internationally. He has been treated in response to his concern by both of those administrations as a radical activist requiring ‘strategic management’ and surveillance, rather than as a thoughtful engaged citizen and doctoral student, who, as a father of two, has no time for radical-activism-for-the-fun-of-it. From this experience, Bjorn has sobered his estimation of the capacity of these settler administrators to willingly relinquish entitlements to their continued advancement of a narrative that resource extraction is inevitable and that the Canadian mining industry has exceptional practices worth sharing with other jurisdictions. This experience presently affects Bjorn’s perspective.

As a result, what Bjorn may intend as orienting his voice toward a distant horizon of hope for structurally challenging the violence of modernity, others may read from him as cynicism toward the potential to adequately modify, tweak, or reform the current settler-dominated systems that delimit what is acceptable and possible. Corresponding with his intended orientation toward structural change over system tweaks, Bjorn also intends to focus efforts into ‘going for the jugular’ by disrupting the narrative of settler benevolence that oxygenates settler futurity.

Bjorn and his family are personally acquainted with families and communities in Canada and in the ‘global South’ that have been directly affected by aggressive mining industry practices. It has an effect on Bjorn’s perspective and interpretation. Some have suggested that Bjorn’s determination to hold to an idealism of rejecting the ‘inevitability of mining against the refused consent of indigenous communities’ is a manifestation of the arrogance of youth, but it might also instead be a learned value from his parents and grandparents who demonstrated in their own lives, even at an older age, a determination to orient their decisions around firmly held ethical principles despite the costs those ideals held for their own convenience and comfort. Bjorn believes that those familial role models affect his perspective and his interpretation of actions.

Isaac Kukoc Paz is from a Bolivian mining family. His father was a geological engineer and owned an operating mine, where Isaac spent all his vacations until the age of 12. After a resource price crisis and government revocation of mining concessions forced abandonment of the mine, the family migrated to another city in Bolivia. Isaac later studied psychology and his subsequent work has dealt with the health effects of mining from the point of view of mine workers and surrounding communities. This background enabled Isaac to understand multiple perspectives on the data analyzed in the article. His experience with Latin American universities, including ones in Bolivian mining towns where mining-health research is subject to censorship, also informed his approach to the analysis. Finally, Isaac's doctoral studies were financed by Canadian development assistance to Ecuador, with involvement of many of the institutions discussed in the paper. These linkages informed Isaac's engagement with the paper topic, as did his lived experience of historical and ongoing exploitative relationships between Latin America and the global North.

Marta Berbés-Blázquez: I am a white Hispanic settler and a recent immigrant to the United States. I was part of the initial group that obtained financing from Antipode Foundation (UK) and the International Development Research Centre's EkoSanté program (Canada) to host the international workshop that founded the Frente Colibrí with some of the co-authors of this paper. At that time I was completing my doctorate degree in Environmental Studies at York University (Toronto) and I am currently an assistant professor at the School for the Future of Innovation in Society at Arizona State University (Tempe, USA).

There are many relationships and activities that influence my research. With respect to this manuscript, the most significant one would likely be my own work studying the impact of large-scale agricultural plantations in human well-being in rural communities in Costa Rica, which was partially funded by the International Development Research Centre. As well, through that research I became part of the Communities of Practice in Ecosystem Approaches to Health both in Canada and Latin America.

Juan Gaibor: In recent years, several Chinese and Canadian companies have begun mining exploration in the Province of Bolívar (Ecuador), and in some cases are extracting minerals, especially gold and copper. There are many peasant movements against mining, and in some cases there is violence to prevent the activity. At the Environmental Center of the State University of Bolívar, of which I am the coordinator, we seek to understand the complexity of the mining issue and, above all, we are concerned with the human health and environmental impacts it may have. I also previously studied in the Public Health with an Ecosystem Approach Masters program and Doctorate in Collective Health, Environment and Society at Universidad Andina Simón Bolívar (Ecuador). These two programs both involved funding from Canada, as well as study into the impacts that unsupervised mining activity can cause. This background shapes my awareness of the article's subject, and helps me to continue dialoging with public and private institutions about the sensitivity and importance of the mining issue.

Donald Cole was a tenured professor at the University of Toronto, a university heavily sponsored by Canada's mining industry, including in the health sciences. He also headed the Capacity Development group with the CCGHR) for a number of years prior to the events

described in this paper, including co-leading a 7th Summer Institute in Quito, Ecuador and evaluating it and prior summer institutes with Canadian Institutes for Health Research funding. He participated in CCGHR's reflection on corporate funding of global health research, including co-facilitating a CCGHR conference sub-session. He also has a long history of occupational medicine practice, including seeing miners with health impacts related to mining, and collegial relationships with colleagues documenting such impacts globally.

Erica Di Ruggiero: I am a Canadian woman, mother, global health researcher and educator, of European descent, who was born and grew up on the island of Guadeloupe. I have been a member of the Canadian Coalition for Global Health Research since its inception in the mid-90s. At the time, I was working for the Canadian Institutes of Health Research. My positionality is influenced by deep commitment to redressing structural inequities, which is at the core of all my practice as a global health researcher and educator. This commitment is aligned with the coalition's principles for global health research. My perspective is also influenced by my past involvement in several coalition-led summer institutes (in my role as research funder, member of the planning committee and facilitator), and more recently as a faculty member in a school of public health.

Lori Hanson has for more than three decades worked in and with agricultural communities in Nicaragua and with progressive social movements for health more broadly; interests which eventually led to her collaborative action research on and with people in rural communities in both Nicaragua and Greece that are organized in opposition to Canadian gold mining and to work with the People's Health Movement more broadly on solidarity with organizations and

communities of the Global South that are concerned with the impacts of Canadian mining developments. She worked with the lead author and one other author to co-develop a 2015 letter regarding CCGHR's involvement with CIRDI that precipitated follow-up education and research activities and publications that took up the theme of corporate sponsorship of global health research within the organization.

Craig Janes is a medical anthropologist whose research and practice has focused largely on applying social science perspectives in global public health. He is a white academic from a non-academic middle class family who has worked throughout his career in partnership with communities in the Global South. This commitment includes providing funded opportunities for members of these communities to pursue advanced degrees in public health, both in the US, and Canada. He has mainly worked in the Pacific, Central Asia, and Africa on a variety of health systems and public health issues, with a particular commitment to identifying and addressing health inequities. His current work includes research on climate change and health in Western Province, Zambia, and with funding from the Social Sciences and Humanities Research Council of Canada will engage health and civil society sector advocates in Zambia to respond to the gendered health impacts of mining.

His work with his (then) graduate students, Oyuntsetseg Chuluundorj and Lesley Johnston, on the negative effects of neoliberal governance on resilience to climate change among rural pastoral communities in Mongolia brought him into contact with the adverse social and ecological impacts of mining (formal as well as artisanal), and provided the impetus for he and his Mongolian partners in the public health sector, and in the World Health Organization (WHO), to organize international meetings, workshops, and knowledge exchange and synthesis

activities to address the public health consequences of the extractive sector in Mongolia. These activities culminated in progressive policy changes that required enhancements to impact assessment and public health hygiene laws. Recognizing the need to ensure that these policy changes actually made it into regulatory practice, the team, led by former spring institute alumna Oyun Lkhagvasuren, developed the idea for the spring institute described in this paper. Janes took the initiative to secure funding for the institute, receiving one grant from the Canadian Institutes for Health Research, and through his connections with faculty colleagues at Simon Fraser University (SFU) affiliated with CIRDI, was invited to submit a proposal for additional funding to support the Institute, which was funded in early 2015. Participants in the institute were selected to represent those in the public and academic sectors responsible for implementing the new regulations. In keeping with the Spring Institute concept, several participants from Africa and Canada whose work involved the health effects of mining were also selected to participate. The Mongolia-Canada team, with assistance from Ame-Lia Tamburrini, then of Habitat Health Impact Consulting (Calgary, AB), an organization that specialized in health impact assessments in the extractive sector, developed the curriculum for the institute and organized the activities to be consistent with the mentored knowledge-to-practice perspectives that are the hallmark of the CCGHR Spring Institutes. Janes has been a longtime member of the CCGHR, joining the organization in 2005 when he immigrated to Canada from the U.S., and served as a Board Member, Board Chair (President), and interim National Coordinator until 2014. He did not have a formal role with CCGHR at the time of the Spring Institute (May-June 2015) described in this paper.

Katrina Plamondon: I am a Canadian woman of Cree, Irish, Jewish-German, and Quebecois ancestry, a mother, registered nurse, author, and artist. I read as White, and reconnecting to my Cree roots is central to my positionality and life-learning. I am motivated to do equity work by personal and family experiences, as well as having borne witness to the realities of systemic inequities between and within countries. I have been a member of the CCGHR) since 2005, have held several volunteer positions since that time. At the time of the institute in Mongolia, I was co-chair of the CCGHR Policy Influence Program. I am currently the co-chair of the University Advisory Council, a group of liaison representatives from each of the 29 institutional members of the CCGHR. I was the Principal Investigator on the studies that led to the development of the CCGHR Principles for Global Health Research (a set of six equity-centred principles for research, practice, policy, KT, etc.) -- and now use these principles as a foundation for a program of knowledge translation science aimed at supporting people to align equity intentions with their actions. I am employed as an assistant professor in the School of Nursing at the University of British Columbia Okanagan. CIRDI remains active at my university, though I have no personal ties to their work, and have not received or pursued funding or collaboration with this institute.

Jerry Spiegel: I am a tenured Professor at the School of Population and Public Health at the UBC, a university that has received considerable funding from the Canadian mining industry. As the founding chairperson of the CCGHR, I was involved in various summer institutes, although not the one in Mongolia that is discussed in this article. Over the course of longstanding capacity strengthening and research collaborations that I led in Ecuador between 2004 and 2020, I repeatedly learned of concerns of Ecuadorian colleagues and local communities regarding Canadian mining companies' activities in vulnerable highland ecosystems. I was particularly

alarmed when it was suggested that it would be safest to not send UBC students to participate in clinics in affected communities to avoid their being seen as Canadians who were associated with these companies. Given the extent of such experiences that I was witnessing firsthand as well as similar accounts of local impacts elsewhere, when CIRDI was being established at UBC, I suggested unsuccessfully then that particular attention and support be given to directly include representation from such communities – and that attention be given to considering what standards could be deemed to be acceptable as standards, including what processes should be observed with regard to conducting health impact assessments. In addition to this, my various attempts to have Canadian mining companies play a role in providing technical support to assist artisanal and small-scale mining reduce negative health and environmental impacts were similarly unsuccessful. I continue, however, to pursue research collaborations in Ecuador and elsewhere (notably southern Africa, as well as Canada) into identifying ways for promoting health equity, especially through documenting and reducing negative effects of development on health and environment, including that associated with extractive industries such as mining.

Annalee Yassi: I am a Canadian woman of Ashkenazi Jewish background; I am a mother and grandmother; and I am a public health/occupational medicine practitioner and researcher fortunate to have a tenured university position that allows me to speak truth without fear of personal consequences. From an early age I was surrounded by people fighting social injustices, and was an activist throughout my formative years, particularly focused on social class and gender inequalities. Early in my career as a physician working with labour unions I was struck by the ill health created by unsafe working conditions for the people producing the enormous wealth of the capitalist class, and as I got involved in North-South collaborations, the immense

negative impact worldwide of the extractive sector and mining in particular, was inescapable. I saw how extractivism goes hand-in-hand with racism and colonialism, with policies imposed upon the Global South serving as land grabs and to supply cheap labour for the destructive activities and wealth accumulation of the extractive sector. Growing up in Canada I knew shockingly little of the brutal anti-indigenous history in this country, and the more I learned about the colonial past in this country, the more I came to appreciate how colonialism is still very much an open wound. That indigenous land defenders following indigenous law and values are being jailed during a pandemic in 2020 for peaceful opposition to harmful fossil fuel pipeline expansion is hard to fathom but is indeed happening. I approach my role as a public health researcher, occupational medical practitioner and concerned human being informed by the critical scholarship of both my son Sam, and daughter Jen, nurtured by my partner in life Jerry, my colleagues in Latin America and southern Africa, as well as my involvement in the CCGHR and the Ecohealth networks. These are scary times, and I feel that it behooves all of us – but especially those of us who have secure positions in our own lives – to do whatever we can to turn back the social and environmental injustices that threaten the very existence of life on our planet.