LATIN AMERICAN STUDIES ASSOCIATION

FORUM

SPRING 2022

53:2

LASA2022

Polarización socioambiental y rivalidad entre grandes potencias

VIRTUAL CONGRESS • MAY 5 – 8, 2022

IN THIS ISSUE

The *LASA Forum* is published online four times a year. It is the official vehicle for conveying news about the Latin American Studies Association to its members. LASA welcomes responses to any material published in the *Forum*.

ISSN 0890-7218

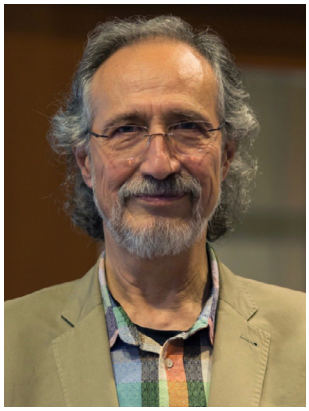
Del presidente de LASA

by **Gerardo Otero,** president of LASA | Simon Fraser University | otero@sfu.ca

El mundo cambió el febrero 24 de 2022 con la invasión rusa de Ucrania. De inmediato, se han exacerbado gravemente las tensiones entre grandes potencias. La unificación que ese conflicto ha causado entre las potencias de Occidente, sobre todo entre Estados Unidos y los países miembros de la Organización del Atlántico Norte (OTAN), se expresa en las fuertes sanciones impuestas a Rusia. Se podría decir que se trata de una especie de "opción nuclear" financiera: el congelamiento de casi la mitad de los fondos del banco central ruso, su marginación del sistema internacional de pagos SWIFT, e innumerables sanciones adicionales. Sus reverberaciones en toda la economía mundial serán vastas, profundas y posiblemente de larga duración.

Es demasiado temprano para anticipar las ramificaciones específicas para Latinoamérica y el Caribe (LAC), pero no debe caber duda de que la tragedia de Ucrania va a profundizar la rivalidad entre grandes potencias. Ya habíamos anticipado que este tema sería de la mayor importancia para LAC, tanto así que el tema central de nuestro congreso LASA2022 es "polarización socioambiental y rivalidad entre grandes potencias". El énfasis principal que hemos dado con mis copresidentes del programa (Kata Beilin, Enrique Dussel Peters y Birgit Müller) ha sido sobre la relación China-América Latina y el Caribe. El conflicto en Ucrania ha exacerbado las tensiones no solo con Rusia sino entre las potencias de Occidente y China, toda vez que este país se abstuvo de condenar la invasión rusa.

Por su parte, el gobierno chino ha denunciado el papel central que han jugado las potencias miembros de la OTAN al expandirse hacia el Este. Se han incorporado a esta organización de seguridad varias de las exrepúblicas de lo que fue la Unión de Repúblicas Soviéticas Socialistas (URSS), misma que se colapsó en 1991. La expansión de la OTAN propició que Rusia, que fue la república dominante dentro de la URSS, percibiera —justificada o injustificadamente— una amenaza cada vez mayor de acorralamiento de su seguridad interna. La diplomacia china ha reiterado desde el inicio del conflicto que las potencias de Occidente no han sido sensibles a esta percepción sobre la seguridad interna rusa. Se trata de una historia compleja que atañe varias escalas de análisis, desde lo nacional hasta lo geopolítico, y que no me propongo discutir aquí. Pero sí podemos destacar que la rivalidad entre grandes potencias pone a LAC en dilemas aún mayores que los que se tenía antes de la guerra en Ucrania.



En la siguiente sección de este número de *LASA Forum* destacamos, con mis copresidentes del programa, los temas principales que se van a discutir en los paneles presidenciales que hemos organizado colectivamente. Quiero agradecer muy cálidamente a mis tres colegas, Kata Beilin, Enrique Dussel Peters, y Birgit Müller, por el acompañamiento que me han dado en la concepción y organización académica del 40 congreso de LASA. Han fungido también como mis principales interlocutores en varios otros asuntos de la organización y comentado mis comunicaciones. Por todo ello, mil gracias.

Primer Congreso Regional LASA-Asia

En lo que resta de esta introducción a nuestro último número como equipo editorial de *LASA Forum*, voy a informar a la membresía sobre

los resultados del Primer Congreso Regional LASA-Asia. Se trata de una magnífica noticia, puesto que el evento fue todo un éxito. Hubo una asistencia de 480 participantes, no sólo de Asia, sino también de Latinoamérica, Estados Unidos y otros países. Reitero mi profundo agradecimiento a la Red de Estudios Latinoamericanos del Este Asiático (EANLAS, por sus siglas en inglés) por su ayuda en la organización del evento, y muy especialmente a nuestra expresidenta Gioconda Herrera y su equipo de organizadores. Me permito reproducir aquí la traducción de una selección de las palabras que dirigí al inaugurar este congreso. Luego presentaré una selección de los agradecimientos que recibimos de algunos de los organizadores y participantes.

Hilvanando con el tema de la rivalidad entre grandes potencias, señalé que "he estado personalmente muy preocupado por la postura beligerante que ha adoptado el Presidente Joseph Biden de los Estados Unidos desde el principio de su administración. No solo ha continuado la guerra comercial que inició su antecesor, sino que ha agravado el tono de la rivalidad, haciéndola aparecer más como una confrontación. Para Biden, la rivalidad va mucho más allá del comercio internacional. Él la ha planteado como una disputa entre democracia y autoritarismo, lo cual me parece inverosímil. Y no soy el único que piensa así. Algunos expertos en política exterior de su país están preocupados de que es "Estados Unidos, no China, el que está empeorando las tensiones al sobre interpretar el comportamiento de su rival de lo que la situación lo amerita" (En el original: "It is the U.S., not China, which is worsening tensions by reading more into its rival's behavior than the situation merits") (John Rapley, "We're Not Entering a Cold War with China" *Globe and Mail*, January 29, 2022).

"Latinoamérica y el Caribe se beneficiaría enormemente de la emergencia de un mundo multipolar en el que los socios comerciales se multipliquen y coexistan pacíficamente. Por tanto, el peor resultado para la región sería que el gobierno de los Estados Unidos empuje a sus países a que escojan quiénes son sus amigos para el comercio, la inversión y otros intercambios. Esta postura de estás con nosotros o estás con ellos lleva a una lógica de suma-cero. Los políticos y académicos de Asia-LAC pueden y deben jugar un papel mediador para promover la cooperación o la competencia entre las potencias en un mundo multipolar, a la vez que se reduzcan o eliminen los conflictos. De esa forma, la relación entre China, LAC y los Estados Unidos podría asumir más bien un carácter de suma positiva para el bien común.

"Nuestra preocupación principal debería enfocarse en la catástrofe existencial del cambio climático y la superación de las desigualdades socioeconómicas que se han profundizado desde los años ochenta del siglo XX. Las relaciones internacionales deberían mantenerse en un terreno amistoso y cooperativo. Ojalá que sus discusiones en este primer Congreso Regional de LASA en Asia encuentre algunas formas específicas de lograr esto. Los dejo con mis mejores deseos de que tengan un intercambio intelectual estimulante y productivo."

A continuación les transcribo el tenor de algunos mensajes de agradecimiento que recibimos por organizar el Primer Congreso Regional LASA-Asia. Transcribo sólo la parte sustantiva de los mensajes en el idioma en que fueron enviados, dentro de una cadena de correos electrónicos:

> *También me agrada mucho que haya tenido lugar con éxito el congreso LASA-EANLAS y con mucho gusto apoyaré a las futuras colaboraciones.*
> *Saludos cordiales.*
>
> **— Sang-Rae Lim, PhD, Busan University of Foreign Studies**

> *Warm congratulations for the great success of the brave new initiative of LASA-EANLAS. I just want to suggest that we should keep this growth engine alive. Let me think about as well!*
>
> *Many thanks for LASA staff for the silky-smooth management of the conference.*
>
> **— Jae Sung**

Thank you, too, for making me a part of this process. I could not imagine that this project could grow like this. This success owes very much to LASA's excellent organization. Let us keep in touch!

— Nobuaki Hamaguchi

I would like to echo what Prof. Kwak and Hamaguchi said. Congratulations to all of you for excellent organizing and management of the first congress LASA-ASIA. Everything went super smoothly and I felt home. In particular, I would like to mention a superb collection of films. I watched all of them, they are fantastic!!!

Hopefully we can move forward with this energy in the future.

un abrazo fuerte a tod@s,

— Jungwon

Thanks to all of you! I want to add that many voices in my surroundings agree that it was an essential platform for previously unconnected ideas/people, and they are very willing to join in the coming years. To the executive team members in particular, while my contribution to organizing the event was pretty much minimal, I have no doubt countless efforts from both the excellent LASA team and Chinese, Korean, and Japanese colleagues made it happen. My sincere appreciation to all of you.

— Isamu Okada

Thank you all very much for the efforts of the successful LASA-EANLAS conference. It is an excellent beginning. We in China will continue to cooperate with colleagues in Japan and Korea to promote the Latin American studies, both in LASA and EANLAS framework or other channels. We should discover new ways of academic exchange in the time of COVID-19.

— Dong Jingsheng

I couldn't agree more. The congress turned out amazing! Many thanks to all for making this happen, and I am so honored being part of it. Look forward to our follow-up collaboration on this initiative. //

Socioenvironmental Polarization and Rivalry among Great Powers

by **Gerardo Otero,** LASA President, 2021–2022, and LASA2022 Program Co-chairs: **Kata Beilin, Enrique Dussel Peters,** and **Birgit Müller**

As our Congress is about to begin on May 5, 2022, we have all been forced to reflect on the dangers of the growing polarization between the Great Powers. This is indeed the main theme of our conference, in addition to the socioeconomic and environmental polarization within Latin America and the Caribbean. The war in Ukraine, which clouded our hearts as the pandemic began to subside, will undoubtedly appear often in our conversations during the Congress, in various contexts. We also think about the significance of the intercultural dialogue that we envisioned in San Francisco and will now be carried out online. Our intention was to search for understanding among different cultural and political perspectives, which we thought could be our academic contribution to peace. This peace would mean that our best possible collaboration would benefit not only the involved nations and peoples, but also the planetary environments with remaining nonhuman species, soils, and water. Nothing is as environmentally destructive as war, apart from being the greatest human disaster. For good and bad, nowadays flows of resources, ideas, and viruses connect all of us. The disasters of recent years have made our planetary interconnectedness more perceptible than ever, and the realization that we are all in it together should prompt more responsibility and generosity in exchanges between different academic discourses and between academia and the world.

Latin American studies have always been interdisciplinary. We have attempted to promote an interdisciplinary dialogue among Latin America and the Caribbean (LAC) and other regions of the world, integrating current discussions in the various issues of *LASA Forum* since July 2021. The summer issue, titled "The China and Latin America and Caribbean Relation" and edited by Enrique Dussel Peters, explores the political complexity arising from the growing competition between the US and China in LAC. The fall issue, "Socioenvironmental Destruction, Extractivism and Dependency," edited by Gerardo Otero, debates the dilemmas and challenges of the extractive economies of the twenty-first century and their colonial roots. The winter *Forum*, "Political Ecology and Environmental Governance," edited by Birgit Müller, focuses on the irrationalities and ambivalence of policies justifying business as usual while destroying the very basis of urban and rural livelihoods: water, forests, and biodiversity. Our present spring *Forum*, "Climate Change as a Cultural Problem: Transdisciplinary Environmental Humanities and Latin American Studies," edited by Kata Beilin, discusses transdisciplinary approaches to socioenvironmental problems with renewed conceptual frameworks and in dialogue with Indigenous knowledges.

The excellent presidential panels that we assembled for our 40th LASA Congress will be a continuation of *Forum* interdisciplinary dialogues. Here we highlight some major themes of these panels. Please make sure to check the detailed descriptions, time, and date in the program.

Our keynote speaker is Alicia Bárcena, who will deliver a presentation titled "Latin America, the Caribbean and China: Conditions and Challenges." Bárcena was the executive secretary of the Economic Commission of Latin America and the Caribbean (ECLAC) from July 2008 to April 2022. ECLAC has been one of the central

regional institutions of the United Nations contributing to a systematic socioeconomic analysis of the LAC-China relationship since 2010.

Regarding the increasing rivalry between the US and China globally in LAC, we have organized the presidential panel titled "The Latin America and Caribbean–China Relationship in the Third Decade of the Twenty-First Century." This panel assembles colleagues Enrique Dussel Peters (Universidad Nacional Autónoma de México), Adrian Hearn (University of Melbourne), Rebecca Ray (Boston University Global Development Policy Center), Chai Yu (Institute of Latin American Studies of the Chinese Academy of Social Sciences), Celio Hiratuka (Universidade Estadual de Campinas), and Cynthia A Sanborn (Universidad del Pacífico), with chair Gerardo Otero (LASA President, Simon Fraser University). These specialists will discuss current challenges in the relationships between the Great Powers and their effects on our region from a variety of perspectives, including socioeconomic and environmental debates as highlighted in the LASA 2022 Congress title.

Three presidential panels, on lithium, Amazonia, and agriculture, bring together perspectives from political ecology and recent strategic developments in Latin America. The focus is on the mechanisms of governance in the face of increasing internal contestation and ambivalent global connections that continue to extract while calling for compliance with international environmental and climate conventions. These three panels highlight the irrationalities of current economic policies justifying business as usual through denial, lies, and the legalization of illegal practices. They also consider political and ecological alternatives for the future.

To decarbonize the planet, one of the main strategies consists of substituting fossil fuels in transportation with a technology based on electricity, powered by lithium-ion batteries. This strategy seeks not only to "stabilize" the global temperature through emission-free batteries, but also to "stabilize" the increasingly profitable renewable energy markets.

The panel "Worlds of Lithium: Between Powers, Powerlessness and New Political Forces" is chaired by Marina Weinberg (University of Amsterdam) with participants Cristóbal Bonelli (University of Amsterdam), Cristina Dorador (Universidad de Antofagasta), Javiera Barandiarán (University of California, Santa Barbara), Felix Dorn (Universität Innsbruck), and Martina Gamba (Universidad Nacional de La Plata). Marisol de la Cadena (University of California, Davis) is the panel discussant. Presenters will deal with the antinomies of moving away from fossil energies and into transportation powered by zero-emissions batteries. The panel explores the tensions of this energy transition, conceived for the Global North, without considering the ecological implications for the sustainability of interdependent ecological processes in Latin America. By separating the world into discrete and distinct continents, it imposes a univocal and universal linear time. China's increasing demand for natural resources and its offer to build infrastructure have led to the reprimarization of Latin American economies. A patent contradiction emerges between the unwillingness to radically question patterns of production and consumption and instead to extoll lithium, among other minerals, as an ecological and economic stabilizer. Where lithium is extracted, this strategy destabilizes and damages territories located in countries that are already going through severe political crisis, generating, in turn, "territories of powerlessness." These "territories of impotence" challenge and problematize, from their multiple presents, capitalist energy transitions that claim to enact a univocal planetary route.

The panel "Is There a Future for Amazonia? Contingencies, Conditionalities" features some of the top Amazonia researchers and modelers who integrate a range of social, natural, and simulation sciences on large-scale and long-term Amazon questions: Eduardo Brondizio (Indiana University), Cynthia Simmons (Michigan State University), Gustavo Oliveira (University of California Irvine), Britaldo Soares Filho (Universidade Federal de Minas Gerais), and Philip Fearnside (Instituto Nacional de Pesquisas da Amazônia). Susanna Hecht (University

of California, Los Angeles) is the chair and discussant of the panel. The current, accelerated deforestation of Amazonia, which has become a net emitter of CO2 due to tremendous forest fires, menaces the climate and in particular the rainfall in the entire Southern Cone and presages a Southern Cone dust bowl in the decades to come. "Amazonia is not just a key element in the global carbon system but also functions as a kind of land-to-atmosphere water pump, the source of South America's atmospheric rivers," says Susanna Hecht. States have been the explicit territorial owners and enablers of settlement and deforestation, regardless of other forms of legal or illegal interventions in Amazonian worlds. State presence or absence is often strategic, and the forms that this presence takes have huge implications for land, water, and now, of course, air. Between 2004 and 2014, during Lula da Silva's mandate, for instance, deforestation rates were slowed down and dropped by over 70 percent. A complex tool box aligned at many scales was deployed for Amazonian protection, including massive designation of new protected areas, expanded forms of local governance, enforcement of environmental laws, and deforestation moratoria. By 2022, up to 93 percent of the massive clearings qualify as illegal, but deforesters obtain amnesty, titles are transferred, and holdings reconfigured as legal. The panel discusses the implications of current dynamics on the resilience, justice, and "future history" of Amazonia, integrating sciences, social sciences, and commitment for Amazonia.

The panel titled "Debates on the Future of Agriculture: New Technologies, Agricultural Knowledge, Alternatives, and Rights of Indigenous Peoples" features Víctor Toledo (Universidad Nacional Autónoma de México), Kregg Hetherington (Concordia University), Walter A. Pengue (Universidad Nacional de General Sarmiento), Birgit Müller (CNRS, EHESS), and Bernardo Caamal, Maya activist and agronomist. Chaired by Kata Beilin (Universidad de Wisconsin–Madison), this roundtable's discussant is Gerardo Otero (Simon Fraser University). The panel will envision the possible future scenarios for agriculture in Latin America, considering the impacts that industrial agriculture has had on the territories of Latin America, in particular Argentina, Paraguay, Mexico, and Nicaragua. The panelists will consider agricultural technologies from the beginning of the Green Revolution to the latest ones that extend the modern agricultural paradigm: proteomics, genomics, nanotechnology, and GA 4.0 and their environmental and social impacts. The damages suffered by the original populations will be one of the main foci of the panelists' attention.

Among the environmental externalities of industrial agriculture are intangible effects on hydraulic resources and soils, biodiversity, and chronic illnesses of farmworkers and rural populations at the service of modern exploitation, along with the loss of the local knowledge of Indigenous and peasant populations. The panelists will consider how addressing these problems requires the transformation of governance systems for the collective empowerment and autonomy of local actors, and interest in sustainable models, while incorporating different voices affected by extractivist agricultural activities.

When considering optimistic future scenarios, we consider low-carbon eco-agri-food systems, rich in micronutrients, sufficient, sustainable, fair, and respectful of the lifestyles of Indigenous cultures. These systems should not only focus on agroecology but could also integrate the social and solidarity economy and Indigenous and peasant knowledges, in addition to chosen new technologies. Panelists will discuss the obstacles that stand in the way of this optimistic alternative scenario, and the cultural and political values necessary for its implementation.

The panel "Progressive Governments and the Resurgence of the Right in Latin America" addresses sociopolitical polarization. With presenters Carlos Figueroa-Ibarra (Benemérita Universidad Autónoma de Puebla), Gustavo Eduardo Córdova Eguívar (Universidad Mayor de San Simón), Kemy Oyarzun Vaccaro (Universidad de Chile), Emelio Rafael Betances Medina (Gettysburg College-Pennsylvania), and Isabela Kalil (Fundação Escola de Sociologia e Política de

São Paulo), the panel will be chaired by Gerardo Otero (LASA President, Simon Fraser University), with discussant Carla Espósito (Benemérita Universidad Autónoma de Puebla). This panel will discuss contradictory processes seen in Latin America during the first two decades of the twentieth century. Starting in the 1980s, the neoliberal model was proposed and imposed as the only route for the world. But unfulfilled promises and crises started to manifest themselves with the rise of challenging social and political movements from both left and right. The political map was reconfigured with the emergence of post-neoliberal governments, which in turn triggered a right-wing reaction: this was part of a world-wide extreme right-wing trend with neofascist features. It differed from the neoliberal right that was ascendant at the end of the twentieth century. A new phase of coups d'état and "lawfare" emerged as repressive ways to counter the progressive cycle. The neoliberal crisis also spawned expressions of new social actors and new forms of social struggle: in addition to traditional class and union movements, other varied movements were added, such as the cocaleros in Bolivia, Indigenous peoples, retired persons, feminists, movements for sexual diversity, and others. Social networks became critical new and speedy forms of communication and terrains of struggle, a trend that deepened during the COVID-19 pandemic. This panel seeks to analyze this contradictory process of polarization with the rise and seeming downfall of the progressive cycle, which is seeing a rebound in 2022.

Finally, the United States continues to be a major pole of attraction to thousands of Latin American and other migrants displaced by violence and insufficient economic opportunities. US responses to migrant flows have thus become a major issue of contention in internal politics and consternation in LAC. Addressing this is the panel titled "Fixing U.S. Immigration and Asylum Policy: Lessons from Policy-Oriented Research," chaired by Wayne Cornelius (University of California, San Diego) with the participation of Jorge A. Schiavon (Centro de Investigación y Docencia Económicas), Abigail Andrews (University of California, San Diego), David Hausman (Stanford University), and Chloe East (University of Denver). This panel will review key developments in US immigration and asylum policy, discuss the implications of recent policy-oriented research in multiple disciplines, and envision future policy directions, including proposals to mesh immigration/asylum policymaking with demographic changes in the United States and Mexico. It also seeks to more systematically address root causes of migration flows from Northern Triangle countries, including the migration caused by socioenvironmental polarization and climate change, which constitutes the main theme of our conference.

We invite you to follow and actively participate in all these debates. The recordings will be available in the LASA channel in YouTube, so please, share them with your colleagues and students as you see fit. We hope we will learn and think together, and that we will leave the conference with new initiatives, ideas, and collaborations contributing to peace, sustainability, and good life. We also hope that friendships, understanding, and common values that we will affirm in our dialogues will allow us to leave this LASA Congress with more hope for the future. //

Climate Change as a Cultural Problem: Transdisciplinary Environmental Humanities and Latin American Studies

by **Kata Beilin** | Latin American Caribbean and Iberian Studies Program, University of Wisconsin, Madison | kobeilin@wisc.edu

Climate change and environmental destruction can be attributed not only to modern economies but also to the philosophies of life that inspired and justified modern economic development; in other words, the humanities are not blameless. Gerardo Otero's question from the fall *LASA Forum*, "Can Latin America transcend extractivism?," will be rephrased here to ask if and how Latin American studies can transcend the philosophies and narratives that are instrumental in building extractive economies. Various conceptual frameworks used today in research practices and classrooms have been subservient to colonization, helped establish racist hierarchies, and justified extractive practices. There is growing awareness that these frameworks need revision.

Environmental humanities is an interdisciplinary platform of research focused on socio-environmental problems and the process of knowledge construction that led to these problems. Environmental humanities scholars build connections among humanities, social sciences, natural sciences, and other nonacademic knowledges, particularly Indigenous forms, because socio-environmental problems never lie entirely in one disciplinary field or cultural perspective. The focus on real problems with an outlook toward solutions defines transdisciplinary approaches.

Latin American studies emerged as a "transdiscipline" in the 1960s, under the influence of British cultural studies (Pakkasvirta 2011). Early scholarship in the field focused on the understanding of poverty and its projected solution, development. In the 1960s and 1970s, dependency theory traced flows of resources from the periphery to the centers of consumption and analyzed this dynamic as a function of colonization. Around the same time, liberation theology surfaced to condemn this dynamic as unethical. It produced rebellious political pedagogy and consciousness that became an important part of Latin American culture (Stenberg 2006). It was reflected in Eduardo Galeano's *Las venas abiertas de América Latina* (1970), the most widely read book of economic history in the Americas, which transformed the concept of poverty into "impoverishment," and questioned development as imported and foreign to Latin American realities (Norget 2007). These disputes linger in today's socio-environmental thought, which reacts to the intensification of extractivism and the resulting impoverishment of many regions of Latin America in these times of globalization.

The Peruvian sociologist Aníbal Quijano argues that "the model of power that is globally hegemonic today presupposes an element of coloniality" (2000, 533). In turn, for the Colombian anthropologist Arturo Escobar, "development amounted to little more than the West's convenient 'discovery' of poverty in the Third World for the purposes of reasserting its moral and cultural superiority in supposedly post-colonial times" (Reid-Henry 2012). This means that the idea of development was used to impose often-extractive strategies and amounted to neocolonial domination. According to the

Ecuadorean economist Alberto Acosta (2013), the extractivism that accompanied development produced poverty by destroying environments that constituted people's livelihoods, and exacerbated wealth inequality. Climate change, an externality of development, has pushed these and many other intellectuals to explore alternatives to the status quo. In doing so, they have asked how the meaning of poverty and development should be rethought, taking into consideration cultural values and the well-being of local and global ecosystems.

When climate change claimed its first victims in the twenty-first century and environmental humanities was born, its scholarship fit well into the structures shaped by past Latin American studies legacies: engaged transdisciplinary thought; criticism of development and globalization; participation in transformative praxis; and deep epistemological exploration. The Australian historian Libby Robin (2018) defined environmental humanities as an effort to understand humans through a geological lens, and other life forms through ethics. This bridge between the human realms of culture and politics, on the one hand, and the nonhuman realm of the natural sciences, on the other, emerged from the recognition that this modern distinction had been artificially constructed. As Bruno Latour (2012) has argued, reality has never corresponded to the conceptual separation between nature and culture. While humans are animals and, as such, are part of nature, in today's world it is hard to find any nature not transformed by human actions. It could be argued, however, that the separation between culture and nature was subservient to economic expansion. The imagination of nature as "out there," separate from the city, allowed the collapsing of nature into a set of discrete, exploitable resources. Exploitation and contamination proceeded as if these processes were never to affect the human realm (Williams 1975). In *The Climate of History*, the Indian historian Dipesh Chakrabarty (2009) noted that climate change forces humanity to revise the vision of human emancipation from nature and called for humanity's thought to return to Earth. Soon after that, yet another thinker of environmental humanities, Stephanie LeMenager (2019), stated that "we teach climate change in humanities classes because climate change is a cultural problem in addition to being a political and physical one."

Environmental humanities scholars argue that climate change as a cultural problem derives from a series of conceptual errors, such as the illusion of unlimited future technological progress. This illusion provides the hubris that emerges from belief in human superiority over other life forms, and the blindness to the embedded character of human existence in the environment (Riechmann 2018). Attempts to correct these errors gave rise to new conceptual frameworks that intend to transform humanities. The American literature scholar Stacy Alaimo (2010) explained that we are defined by "trascorporeality," because air and water carry minerals, viruses, bacteria, fungi, and toxins that flow through countless animal and plant bodies and eventually become part of humans as well. In her vision, the world leaks into porous human flesh from all directions.

Insofar as Alaimo saw humans as an extension of their environment, she came close to various Indigenous conceptualizations. When the political theorist Jane Bennett coined the idea that inanimate matter can possess political agency, her ideas reminded many of pre-Columbian politics in which mountains and water bodies were consulted in social affairs (Wilkinson 2013; Faust 2001). The strength of Latin American environmental humanities lies in the field's deep awareness of the significance of Indigenous knowledges for constructing new frameworks of thought that would be decolonizing and sustainable. Boaventura de Sousa Santos calls these Indigenous knowledges and other Latin American knowledges inspired by them "epistemologies of the South." His 2015 book *Epistemologies of the South: Justice against Epistemicide* goes beyond explaining the inequality by analyzing flows of capital and resources. De Sousa Santos notices that at the origins of economic injustices, there lies

"epistemological injustice," that is, the practice of privileging some knowledges and concepts over others.

Three examples of Latin American works of environmental humanities that attempt to repair that injustice by deeply investigating Indigenous epistemologies are Marisol de la Cadena's book *Earth Beings: Ecologies of Practice across Andean Worlds* (2015), Eduardo Kohn's *How Forests Think* (2013), and Eduardo Viveiros de Castro's *Cannibal Metaphysics*. De la Cadena undertook the translation of Andean people's relationships with their mountains in ways that did not merely speak of the diversity of cultural conceptualizations of human relations with nature, but also gave voice to the mountains themselves. She made her readers aware that mountains are indeed relevant in Andean politics. Similarly, Kohn pushed his readers to consider "thought beyond the human" by conveying how Quechua people of the Ecuadorean Amazon understand their rainforest as a thinking ecosystem. Castro (2015, 188) claimed that his work was not just about "the objects of indigenous thought" but also about "the possible worlds created by its concepts." These three books, and various others, contributed not only to anthropological research but also presented the humanities at large with new philosophical propositions.

Consider the possibility that there are no subjects and objects but that everything, including animals, plants, and even stones, are subjects equipped with some sort of agency and thought, which are not uniquely human attributes. This is how various Indigenous philosophies view the world.[1] This consideration depends on how we understand and define the concepts of subjectivity, agency, and thought. If we doubt the idea of thought belonging to nonhuman subjects, it is because we understand thought as based on language and its relation to the world. Kohn explains the "thought" of the forest as a series of developing relations through which the life of the forest ecosystem evolves without losing its equilibrium. If mountains and forests are thinking subjects, and thinking subjects deserve political recognition, it becomes plausible that they have interests that should be protected in the same way as those of their human inhabitants. The curiosity about the thoughts and desires of mountains and forests awakens a new kind of nature-inspired spirituality that brings us closer to the Indigenous imagination.

But this is not just an Indigenous idea. Similar sensitivity has been present in all cultures. The legendary Wisconsin conservationist Aldo Leopold defined "thinking like a mountain" as an ecological exercise leading to the discovery of one's place in the ecosystem rather than continued existence as an isolated individual (Leopold 1949). The contemporary ecologists Suzanne Simard and Peter Wohlleben explain that in the forest, trees communicate and process information through fungi that connect their roots, passing signals and nutrients in slow motion so that large tree-mothers can take care of the new seedlings (Simard 2012; Wohlleben 2016). According to the plant philosopher Michael Marder, vegetal beings, while devoid of consciousness, nonetheless possess memories. This imageless memory is an inscription of the diverse stimuli of the environment on the cells of the plant (Marder 2013). Nonhumans have been on the planet longer, their wisdom is older, and humans have always learned from them. For example, the Mayan people believe that their ancestors learned from their *Melipona* bees to build pyramids and to use healing plants. Most importantly, the bees taught them to be a strong and caring community that lives in symbiosis with its surrounding nature (Suryanarayanan and Beilin 2020). The contemporary cutting-edge technology of biomimicry similarly uses nature's wisdom to solve problems that nature has already managed to solve: think the bullet train or solar batteries. Oftentimes, however, hunting for technological patents and sustainable solutions has led to the appropriation of Indigenous people's knowledges while neglecting their needs, voices, and overarching philosophies. The

[1] Pedro Pablo Chim Bacab, interview with Kata Beilin, Mérida, July 31, 2019.

manifesto of Indigenous women and youth in this volume expresses bitterness of "Defenders of Earth" who believe that they are "the living solution to climate change" but who, upon their return from COP26, feel they have not been heard.

The literary and film scholars among us have read and seen too many stories of tragic collisions of Indigenous worlds with white colonizers. From the emblematic work of Brazilian modernism, Mario de Andrade's *Macunaima* (1928), to contemporary fiction films like *El abrazo de la serpiente* (2015) and documentaries like *El choque de dos mundos* (2016) and *¿Qué les pasó a las abejas?* (2019), intercultural contact often brings destruction to the native worlds.[2] Today's decolonial studies question the possibility of healthy intercultural collaborations. Even well-intentioned academic exchanges may turn, once again, into extractive appropriation of Indigenous knowledges, biopiracy, or geopiracy, like in the infamous Herlihy's mapping expedition to Oaxaca (Voosen 2016). On the other hand, however, environmentally minded Indigenous researchers envision intercultural collaborations as necessary to institute policies protecting their ancestral land (see Rosado-May 2015; see also Tania Martínez-Cruz in this volume). Like the old Karamatake, the protagonist of *El abrazo de la serpiente*, various Indigenous intellectuals believe in the need to educate white people to save planetary environments.

The philosophy of *buen vivir* constitutes an intercultural platform for such learning, which like environmental humanities is deeply transdisciplinary and biocentric. Buen vivir thought emerged as a critical reaction to the strategies of development that displayed neocolonial approaches and damaging socio-environmental effects. The alternatives to development that this platform proposes begin with revisions to the concepts of development, poverty, and human and nonhuman nature, among others. This goes hand in hand with practical engagement, thus generating a deeper change in knowledge. Buen vivir is based on the Indigenous vision of life in a community that includes nonhuman forms of life and land. Mountains, forests, animals, and plants belonging to one's environment are considered kin rather than resources. But buen vivir also includes certain "Western" concepts such as "rights" and "quality of life" (Gudynas 2011). While the biocentric framework of buen vivir overcomes the separation of culture and nature characteristic of modern thought, quality of life is redefined there in relation to the environment. For this reason, the platform of rights is often extended to protect the natural realm.

The biocentric focus transforms the meaning of life, as well as its goals and values. In buen vivir, human success, health, and happiness are not possible without the well-being of animals, plants, forests, and other elements of ecosystems that humans inhabit. The idea that one cannot be healthy in a sick world and happy amid dying nature once again connects buen vivir with various trends of alternative Western thought and healing practices. Even if some of its postulates are idealistic, buen vivir should not be seen as a utopic vision but rather as a methodologic and pedagogic approach for building understanding, which would transform purely economistic thinking. To an extent, this has already happened: numerous intellectuals and social movements supported the ideas of buen vivir, and these movements brought critical political changes in Ecuador and Bolivia, including the codification of rights of nature in national constitutions.

In dialogue with the environmental humanities, and in parallel to buen vivir, various allied platforms where humanities, social sciences, natural sciences, and nonacademic knowledges merge have appeared in recent years. Ecological economics presents itself as a "transdisciplinary science" and manifests that "real problems in complex systems do not respect academic boundaries." Herman Daly and Joshua Farley

[2] *El abrazo de la serpiente* (dir. Ciro Guerra, Colombia, 2015); *El choque de dos mundos* (dir. Mathew Orzel and Heidi Brandenburg, Peru, 2016); *¿Qué les pasó a las abejas?* (dir. Adriana Otero and Robin Canul, Mexico, 2019).

(2004, xxiii) argue that "effective problem solving requires the insights and toolsets of a variety of disciplines, defining the goals toward which we should strive would benefit from open discussion of the value sets of different ideologies." Feminist criticism postulates rethinking economics from the perspective of vulnerability and interdependence of life (Orozco 2014). Similar to buen vivir, ecological and feminist economics is biocentric. Both trends of thought search for alternatives for economic development in its meaning of growth (Herrero 2016). They argue that happiness and human flourishing do not derive from consumption, but rather from learning, engagement, relationships, and appreciation of nature.

Biocentrism emerges in environmental cultural studies, animal studies, and multispecies and interspecies studies that trace relationships between human cultures and different forms of life as they build their worlds together. Forest, water, seeds, soil, turtles, bees, and other nonhumans are the foci of research in these new visions. In hydrohumanities, the conceptualization of water is transformed from a raw resource into a life-building substance that manifests varying degrees of liveliness as it defies human attempts to contain and regulate it. Chemo-ethnographies, influenced by science and technology studies (STS), traces how chemical substances are conceived of, how we justify their use, and later also how these substances travel through soil, water, and air to human, animal, and plant tissues, often sickening them. This list of new transdisciplinary frameworks and methodologies focused on materiality and life from a biocentric perspective is obviously incomplete. The articles by Ruth Goldstein, Ignacio López-Calvo, Óscar Pérez, and Jorge Marcone in this volume constitute good examples of these new approaches.

In the first paragraph of this essay, I stated that humanities are co-responsible for environmental destruction and that it is necessary to transform concepts such as "development," "poverty," "nature," "culture" and various others if we want to change economic patterns and institutions. I now need to admit that the efforts of the pedagogies that attempt to change the way we think must be placed in the framework of global economic exchanges. As Adrian Hearn explains in his article in the summer *LASA Forum*, the importance of pork in Chinese cuisine makes for the rapid expansion of soy plantations in Brazil at the expense of the Amazon rainforest and community multicrop farming. A similar connection could be made with the American and European cultures' love of meat. In the winter 2022 *LASA Forum*, Birgit Müller and other writers stressed the power imbalance created by globalization. The demand for pork and beef may have a more substantial impact than the desire to defend Latin American forests.

The problems created by globalization need to be solved simultaneously at the local and global levels. International and interdisciplinary conversations such as the one that our conference undertakes must bring more understanding about priorities, meanings, and values, and define development in the context of our relationships with the natural environment. It is obvious that millions of people around the planet are forced to give priority to their daily sustenance over the long-term well-being of the planet. It would be a great success, however, if we managed to achieve a common understanding among international leaders and teachers that no one will be healthy in a sick environment, and that our defense of forests, mountains, and oceans is self-defense.

References

Acosta, Alberto. 2013. "Extractivism and Neoextractivism: Two Sides of the Same Curse." In *Beyond Development: Alternative Visions from Latin America*, edited by Miriam Lang and Dunia Mokrani, 61–86. Amsterdam: Transnational Institute.

Alaimo, Stacy. 2010. *Bodily Natures: Science, Environment, and the Material Self*. Bloomington: Indiana University Press.

Andrade, Mário de. (1928) 1988. *Macunaíma: O herói sem nenhum caráter*. 1928; reprint, Madrid: Editorial CSIC, 1988.

Castro, Eduardo Viveiros de. 2015. *Cannibal Metaphysics: For a Post-structural Anthropology*. Translated by Peter Skafish. Minneapolis: University of Minnesota Press.

Chakrabarty, Dipesh. 2009. "The Climate of History: Four Theses." *Critical Inquiry* 35 (2): 197–222. https://doi.org/10.1086/596640.

Daly, Herman E., and Joshua Farley. 2004. *Ecological Economics: Principles and Applications*. Washington, DC: Island Press.

De la Cadena, Marisol. 2015. *Earth Beings: Ecologies of Practice across Andean Worlds.* Durham, NC: Duke University Press.

Faust, Betty Bernice. 2001. "Maya Environmental Successes and Failures in the Yucatan Peninsula." *Environmental Science and Policy* 4 (4–5): 153–169. https://doi.org/10.1016/S1462-9011(01)00026-0.

Galeano, Eduardo. (1970) 2004. *Las venas abiertas de América Latina*. Buenos Aires: Siglo XXI.

Gudynas, Eduardo. 2011. "Buen vivir: Germinando alternativas al desarrollo." *América Latina en Movimiento* 462: 1–20.

Hearn, Adrian. 2021. "Building Sustainable Food Systems in the Asian Century: A Matter of Tradition." *LASA Forum* 52 (3): 53–57.

Herrero, Yayo. 2016. "Economía feminista y economía ecológica, el diálogo necesario y urgente." *Revista de Economía Crítica* 22: 144–161.

Kohn, Eduardo. 2013. *How Forests Think: Toward an Anthropology beyond the Human*. Oakland: University of California Press.

Latour, Bruno. 2012. *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.

LeMenager, Stephanie. "What Are the Environmental Humanities? Q+A with Professor Stephanie LeMenager." Interview by Chicago Humanities Festival, May 4, 2019. https://www.chicagohumanities.org/media/what-are-the-environmental-humanities/.

Leopold, Aldo. 1949. *A Sand County Almanac, and Sketches Here and There*. New York: Oxford University Press.

Marder, Michael. 2013. *Plant-Thinking: A Philosophy of Vegetal Life*. New York: Columbia University Press.

Müller, Birgit. 2022. "Don't Look Up: Political Ecology and the Denials of Environmental Governance." *LASA Forum* 53 (1): 3–8.

Norget, Kristin. 2007. "Decolonization and the Politics of Syncretism: The Catholic Church, Indigenous Theology and Cultural Autonomy in Oaxaca, Mexico." *International Education* 37 (1): 78–96. https://trace.tennessee.edu/internationaleducation/vol37/iss1/5.

Orozco, Amaia Pérez. 2014. *Subversión feminista de la economía: Aportes para un debate sobre el conflicto capital-vida*. Madrid: Traficantes de Sueños.

Pakkasvirta, Jussi. 2011. "Interdisciplinary Perspectives on Latin American Studies." *Iberoamericana: Nordic Journal of Latin American Studies* 40 (1–2): 161–184.

Quijano, Anibal. 2000. "Coloniality of Power, Eurocentrism, and Latin America." *Nepantla: Views from South* 1 (3): 533–580.

Reid-Henry, Simon. 2012. "Arturo Escobar: A Post-development Thinker to Be Reckoned With." *Guardian*, November 5, 2012. https://www.theguardian.com/global-development/2012/nov/05/arturo-escobar-post-development-thinker.

Riechmann, Jorge. 2018. *Autoconstrucción: La transformación cultural que necesitamos*. Madrid: Los Libros de la Catarata.

Robin, Libby. 2018. "Environmental Humanities and Climate Change: Understanding Humans Geologically and Other Life Forms Ethically." *WIREs Climate Change* 9. https://doi.org/10.1002/wcc.499.

Rosado-May, Francisco J. 2015. "The Intercultural Origin of Agroecology: Contributions from México." In *Agroecology: A Transdisciplinary, Participatory and Action-Oriented Approach*, edited by V. Ernesto Mendez, Christopher M. Bacon, Roseann Cohen, and Stephen R. Gliessman. Boca Raton, FL: CRC Press.

Simard, Suzanne W., et al. 2012. "Mycorrhizal Networks: Mechanisms, Ecology and Modelling." *Fungal Biology Reviews* 26 (1): 39–60. https://doi.org/10.1016/j.fbr.2012.01.001.

Sousa Santos, Boaventura, de. 2015. *Epistemologies of the South: Justice against Epistemicide*. Abingdon, UK: Routledge.

Stenberg, Shari J. 2006. "Liberation Theology and Liberatory Pedagogies: Renewing the Dialogue." *College English* 68 (3): 271–290. https://doi.org/25472152.

Suryanarayanan, Sainath, and Katarzyna Beilin. 2020. "Milpa-Melipona-Maya." *ACME: An International Journal for Critical Geographies* 19 (2): 469–500.

Voosen, Paul. 2016. "The Oaxaca Incident." *Chronicle of Higher Education*, April 27, 2016. https://www.chronicle.com/article/the-oaxaca-incident/.

Wilkinson, Darryl. 2013. "Politics, Infrastructure and Non-human Subjects: The Inka Occupation of the Amaybamba Cloud Forests." PhD diss., Columbia University. https://anthropology.columbia.edu/content/politics-infrastructure-non-human-inka-peru.

Williams, Raymond. 1975. *The Country and the City*. New York: Oxford University Press.

Wohlleben, Peter. 2016. *The Hidden Life of Trees: What They Feel, How They Communicate—Discoveries from a Secret World*. Vancouver: Greystone Books. //

Multispecies Traffic, Infrastructure, and Empire in Latin America

by **Ruth Goldstein** | University of Wisconsin-Madison | ruth.goldstein@wisc.edu

Multispecies traffic in humans, plants, animals, and minerals is taking place in the Amazonian triple-frontier region of Peru's Madre de Dios (M), Brazil's Acre (A), and Bolivia's Pando (P) (see fig. 1). This zone carries the acronym MAP, which is ironic given that the area is known for its inaccessibility and being "off the map," that is, "off the beaten path." The mineral traffic is in gold, the result of artisanal and small-scale mining in Madre de Dios. The gold travels across the borders to Brazil and Bolivia as well as to the United States, countries in Europe, and the Middle East (Cortés-McPherson 2019; Holland 2020). In addition to gold, coca (and cocaine) and exotic wildlife also supply extractive economies in natural resources and nonhuman life in this triple-border region. Human trafficking fills the demand for labor in and around the mines. Women work as cooks, bartenders, or waitresses, often doubling as sex workers—not always of their own volition. Yet women also hold positions of power as owners of mining concessions and equipment, along with the men, who mine for gold. These kinds of multispecies economies are not new, nor are they unique to the MAP region. Delving into the histories of natural resource extraction and human labor in this Amazonian zone illuminates just how deeply interrelated human, animal, plant, and mineral "life in traffic" (Goldstein, forthcoming) are with one another—representing a step in shifting a toxic global dynamic.

I first crossed into Madre de Dios, Peru, along the Interoceanic Highway in July 2011. I had been living in Acre, conducting research on the building of the highway and its socio-environmental impacts, starting in Brazil. Moving along the highway, I was often in the company of people who traveled with their animals (most often chickens, sheep, sometimes a llama), seeds for planting, potatoes and corn for eating, and coca for chewing and ceremonial use. The direction of this type of multispecies traffic

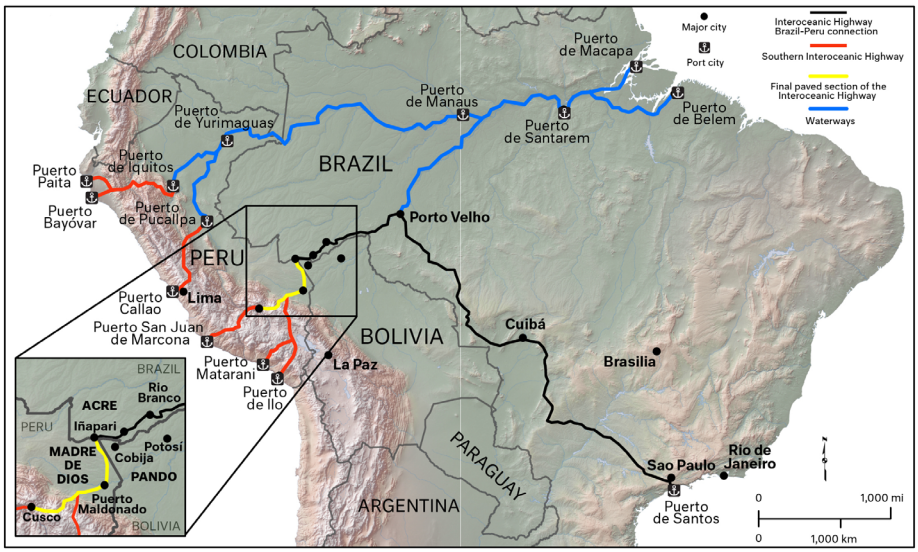


Figure 1. The MAP region, waterways, and the Interoceanic Highway, Brazil–Peru. Map created by Scott Walker, courtesy of Harvard Map Collection.

along the Interoceanic Highway was toward the mines in Madre de Dios. At the other end, the gold and wildlife tended to move out of the mines to global markets. As I dove deeper into the history of the political economy of the region, I began to comprehend the enduring legacy of the European colonial tendency to treat land, nonhuman life, and human bodies as "infrastructures of extractive capitalism" (Graeter 2020). The current multispecies forms of extraction in the MAP region—precious minerals, plants, and animals—are facilitated by the construction of Latin America's Interoceanic Highway, completed in the last days of 2011.

The highway hasn't achieved its promises of transnational economic integration. Rather, informal markets and deforestation proliferate (Baraloto et al. 2015; Chirif 2019, 13–24). La Interoceánica, as the highway is known in Peru, forms the main artery of an infrastructural development project throughout South America (Apurinã 2015; Dammert 2018; Gadea 2012). Coast to coast, the highway spans some 3,500 miles between Brazil's Atlantic and Peru's Pacific, grazing Bolivia. As Latin America's longest latitudinal thoroughfare, the highway has been promoted as pivotal economic development in the Amazonian regions of Peru, Brazil, and Bolivia. Ultimately, Brazil gains access to Peru's Pacific ports, which allows for easier access to Asian markets (Delgado 2008; Harvey and Knox 2015; Moore 2019). Yet the highway's two lanes aren't busy with bustling commerce. Trucks filled with timber of suspect origin rumble by. Otherwise, it's just local traffic: gasoline trucks (often with people, chickens, sheep, and motorcycles hitching a ride on top), taxis, buses, and motorcycles going to and from Madre de Dios' gold mines (see fig. 2). International concern around deforestation is matched only by the rise in sex trafficking in the region, concentrated in the gold mines.

Figure 2. Traffic on the Interoceanic Highway, combustible cresting Abra Pirahuayani. Photo by Stefanie Graeter, shown with permission.

Histories of Multispecies Traffic

The multispecies movement in the MAP region has long existed in myriad forms. Before the Spaniards arrived, the Inca stopped at the edges of the Madre de Dios rainforest. They traded with Indigenous Amazonians but didn't extract human labor or forest resources from them. The current lines of multispecies traffic have their roots in European colonial empire building and then the heyday of the Amazonian rubber extraction. Here, I employ *traffic* to signify the circulation of humans, animals, plants, and minerals in extractive rather than exchange economies. Searching for gold and silver certainly played a main, lucrative role in European colonization. In the early days of Peruvian, Brazilian, and Bolivian statehood, particularly in the quest for the mythic city of gold, "El Dorado," the shiny metal was key, but botany was also big business along with minerals. Prized plants like nutmeg, cotton, rice, tea, poppies (opium), rubber, and cinchona (quinine), to name a few, have spawned global trade and, in some cases, massive conflicts. "Europeans have long moved plants around the world—in vast quantities and to great economic effect" (Schiebinger 2008, 371), yet the importance of plants is often an afterthought, dropped from the pages of history.

That botany is deeply entangled with empire is evident in the movements of early botanists, who not only traveled on colonizing missions and slave ships (Roberts 2021; Schiebinger 2004) but often owned land and slaves themselves. Botanists were "agents of empire" (Mackay 2011; Schiebinger 2004) who functioned as "botanical conquistadors" (Bleichmar 2016). It was no accident that European governments founded scientific societies and supported naturalists'

expeditions while at the same time they established slave-trading companies (Roberts 2021). The active trade in minerals, plants (and seeds), and people needed human labor to keep the mines going and the plantations producing. At the other end of the voyage, once the slaves had left the ships, the cargo holds stood empty. It fit economic rational to fill them with precious minerals, plants, and animals—and sometimes, an exotic person or two—to bring back to Europe to complete the exchange (Cook 2008).

While current neocolonial natural resource economies have shifted in some ways from the previous commodities and colonial trade routes, the MAP region continues to see traffic in humans to the mines, and animals, plants, and minerals often destined for the Global North. Earlier, rubber, cinchona, and just a little bit of gold, along with enslaved native Amazonians, characterized multispecies market economies for export in the region. Now it's a lot of gold, human trafficking to the mines, and illegal trade in exotic plants and animals (USAID 2019). Rubber production now occurs predominantly on plantations in Asia, and quinine harvesting has largely moved to Africa, with the major cinchona forests in the eastern Congo (*Economist* 2019). Yet in the triple-frontier region, the memory of cinchona and the legacy of rubber tapping continues to be felt on the land and its people. Cinchona's malaria-fighting abilities made it a must-have for colonizers. As such, it's became scarce in the MAP region. *Hevea brasiliensis* (rubber) still grows in the rainforest, but the trees left standing bear the scars of the first rubber boom (1879–1912) in the Amazon.

One of the more infamous rubber barons in the MAP region arrived in the early 1890s. Immortalized in Werner Herzog's film 1982 *Fitzcarraldo*, Carlos Fermin Fitzcarrald was an Irish-Peruvian rubber baron who displayed the same brutal characteristics of his enterprising counterparts. Fitzcarrald was not the first rubber baron to arrive in Madre de Dios, though he perhaps left the deepest mark. By the time he arrived in Madre de Dios, some of the native Amazonian tribes had already fled the first round of rubber barons or had been killed (Paredes 2013). The Harakmbut, one of the main Indigenous groups in the region, had hitherto avoided contact with colonizers. Even during the Incan Empire, the Harakmbut had maintained their sovereignty, one of the groups that traded with the Inca for "gold, coca, and pepper" (Gray 2003, 222). But with Fitzcarrald on the hunt for Indigenous labor and land, the genocide of Indigenous Amazonians gained intensity. An estimated 95 percent of the Harakmbut population died between 1894 and 1914 (Gray 2003).

Ironically, it was an act of biopiracy—the theft of biological material and the traditional knowledge associated with it—that halted the Amazonian rubber economy. In 1876, Sir Henry Alexander Wickham managed to smuggle 70,000 rubber seeds out of Brazil. Wrapped in banana leaves, he declared them "academic specimens" to leave the country (Jackson 2008; Muniz 2020). The seeds arrived at Kew Gardens in London, giving the British hope that they could take control of the lucrative market. While it would take decades for rubber plantations in Britain's colonies in Southeast Asia to start producing, Amazonian rubber would eventually lose its foothold. Seedlings sold to Dutch and French companies to start rubber plantations in their colonies meant that by 1910, Amazonian rubber exports had fallen by 50 percent (Davis 1996). Even with slave labor, it was no longer lucrative to tap wild rainforest rubber trees. The deep stores of gold in the MAP region had yet to be intensely exploited. At the time, it just wasn't worth the labor and transport costs. But a century later, roads would change that.

Of Roads, Natural Resource Extraction, and Men

In the MAP region, road infrastructure is linked to creating access for natural resource extraction. And, of course, this necessitates human labor. At the time of the first rubber boom, Peru struggled to control trade and hold its rainforest border with Bolivia (in an area that is now Brazil). Rivers were the roads of the Amazon, and these borders were still in fluid transition. At the end of the nineteenth century and at the beginning

of the twentieth, Bolivia and Brazil were fighting over the rubber-rich Acre region, creating risky ventures for Peruvian rubber barons in Madre de Dios. Peru's strategy, then and now, was to populate the rainforest areas with colonists and create tempting business deals for foreign companies. Without sufficient human or financial resources, the Peruvian government sought (and seeks) strategic ways to bring vested interests to lobby for their country's interests.

Thus the Peruvian government gladly outsourced management of its problem areas in Madre de Dios to the Philadelphia-based Inca Mining Company. The Inca Mining Company had built up a reliable reputation in Peru (Leguía 1912), first appearing as a registered foreign business with land concessions in Peru in 1896, when it acquired the Santa Domingo Gold Mine in the Carabaya region (Anaya 1996). This was where the Inca had also mined for gold until Pizarro caught and killed Atahualpa in 1532. This was also the area in which the Inca had made contact with the Harakmbut. Unlike the European and North American entrepreneurs, the Inca did not enslave or kill Indigenous Amazonians in Madre de Dios. Their previous gold mining in the area, however, signaled an *X* on the map for those who would follow. Consequently, it is also where some of the gold mining happens today.

Just as the histories of gold mining in the region would affect contemporary natural resource extraction, so have rubber and road-building efforts shaped the current extractive resource economies. In 1902, the Peruvian government sealed a deal with the Inca Mining Company giving its owners control over a huge rubber concession in Madre de Dios in exchange for building a road. A sibling enterprise, the Inca Rubber Company, came into being, administering to the new land holdings and its exploits (Paredes 2013). The agreement between the Peruvian State and the US company proved mutually beneficial: the US presence helped stabilize the border with Bolivia in 1903, and the Inca Mining and Inca Rubber Company gained access not only to immense rubber producing areas in the Amazon but to the road that it built near its Santo Domingo Mine in the Andes (Gray 2003; Paredes 2013). The road would run to the headwaters of the Tambopata River (Moore 2019), making transport of the company's plant and mineral holdings far more efficient. The 130-kilometer road that the Inca Mining and Rubber Company would build took three years to complete (Moore 2019), providing access for the first time between the Andes to Madre de Dios. This unpaved turn-of-the-century route would lay the foundation for a section of the Interoceanic Highway, setting the tone for the human foot traffic, vehicle traffic, plants, and animals as well the human labor trafficking on it today. The towns of Filadelfía and Baltimore still exist in Madre de Dios, a testament to the histories of extraction and exchange to the "sister cities" in North America where the rubber was processed.

Infrastructure as Money Trafficking

Nearly a century after the Inca Mining and Rubber Company built its unpaved road, plans were underway to construct the Interoceanic Highway through the MAP region. In Madre de Dios, an area roughly the size of Portugal, the highway constitutes the first paved thoroughfare of any kind (Dourojeanni 2006; Harvey and Knox 2015). In 2001, the Brazilian president Fernando Henrique Cardoso proposed the building of the highway through Peru and Bolivia at a meeting of the South America Infrastructure Initiative (IIRSA, now called Consejo Suramericano de Infraestructura y Planamiento). The following years would be characterized by contracting bids, consolidation of capital, failure to execute social and environmental assessments, and protests against the building of the road, particularly in Peru and Bolivia. (Extensions of the highway network remain stalled in Bolivia.) When construction of the Interoceanic Highway was finally underway between Peru's Cusco and Puno, in the Andes, and the Brazilian border in Acre, passing through Madre de Dios, the 2008 global economic crisis hit. This only intensified the demand for gold. The highway has thus become an efficient conduit for facilitating the illegal economies in gold, exotic wildlife, and humans.

Several years after the completion of the highway, scandal broke, but it wasn't until 2016 that the CEO of Odebrecht, the Brazilian company that won the bid to build La Interoceánica, was indicted. In a fittingly named corruption investigation, "Operation Car Wash" (*Lava Jato*), the money laundering involved in infrastructure projects around Latin America became clear, one case at a time. To date, Odebrecht has admitted to bribing five Peruvian presidents to win construction contracts, along with numerous functionaries. Alan García, in his second presidential term (2006–2011), oversaw much of the highway's construction. I watched him "inaugurate" La Interoceánica in Madre de Dios shortly before he left office in July 2011. In April 2019, Alan García took his own life rather than be arrested for his role in Lava Jato. In other countries, the corruption runs just as deep. From coast to coast, the very making of the highway rests on a foundation of deceit and steamrolling over Indigenous protests.

Gold, Plants, and People in the Global Market

Highways like La Interoceánica function as border zones (Campbell 2012; Harvey and Knox 2015) between "nature" and "culture," fundamental relations in configurations of capital facilitating the many forms of movement on their surface. The global demand for gold that comes into play with the construction of the highway spurs migration to the Amazonian rainforest mines, but it also contributes to stasis. Andean and Amazonian inhabitants seeking economic opportunities find themselves stuck along the highway—in mudslides, broken-down vehicles, or conditions of debt peonage. The "encumbrances of exchange" (Winchell 2018) occur, not surprisingly, along well-worn colonial fault lines of racial, sexual, and gender difference. Border crossings reveal the transit of people and things if not also the edges of empire, where the traffic in women, plants, and gold are not entirely separate markets. As a physical setting, the highway is also part of the political economy that creates the conditions for the traffic in humans, plants, and minerals.

Over the past decade, Peru has often ranked among the top ten gold producers in the world and vied with Brazil for first place in Latin America (Martinez et al. 2018; Espin and Perz 2019). Madre de Dios contributes an estimated 25 percent of Peru's gold exports, all considered illegal. The gold is transformed into phones and other electronics (Buccella 2014; Tubb 2020) and will arrive in jewelry stores and banks (as bullion) in Europe, the United States, and the United Arab Emirates (Cortés-McPherson 2019; Holland 2020). The estimates of how many people work in the mines is subject to much speculation: a 2011 government report suggested there are 30,000 gold miners (Álvarez et al. 2011). By 2018–2019, the estimates had risen to 70,000 gold miners in Madre de Dios (Damonte 2018; Fernández et al. 2019). There's no clear idea how many sex workers operate in the gold mines. In terms of coca production and cocaine export, Peru follows Colombia (with Bolivia a close third), as a global producer (UNDOC 2021). Other (medicinal) plants in wildlife trafficking that move to and from Peru also go around the world as part of a multi-billion-dollar herbal medicine trade (Allkin 2017).

Infrastructure projects like roads produce mobility but also contribute to jams, crashes, and collisions that end lives. La Interoceánica is the foundation for, and part of, a set of relations that create different and sometimes fatal conditions for human and nonhuman life in Madre de Dios and beyond. The highway is not so much a new form of empire building but rather a fundamental component to long-standing political economies of extraction that rely on cheap human labor. Natural resource economies have always been extractive ones, where plants and minerals, human and nonhuman lives all become commodities. These "extractive economies are buttressed by a multitude of international and bilateral trade and investment treaties" (Müller 2022), as they have always been.

In Amazonia, extractive economies cannot be understood in isolation from their deep global histories. Eduardo Galeano's concern that in "the colonial and neocolonial alchemy, gold changes into scrap metal and food into poison [En la alquimia colonial y neo-colonial, el oro

se transfigura en chatarra, y los alimentos se convierten en veneno]" (1970, 8) remains devastatingly true. If the Amazon rainforest, dubbed "the lungs of the earth" and "nature's pharmacy," is an oxygen-creating, life-sustaining ecosystem for the globe, then the effects of road building and trafficking in natural resources are planetary. Controlling rising temperatures means confronting the finite destiny for many species on a hot Earth. Recognizing such difficult endings—and toxic beginnings—may not produce a restructuring of global power, but it may support an impulse to resist, grounded in the knowledge that these multispecies economies may be part of our past but they need not dictate our collective future.

References

Allkin, Bob. 2017. "Useful Plants–Medicines: At Least 28,187 Plant Species Are Currently Recorded as Being of Medicinal Use." In *State of the World's Plants*, ed. K. J. Willis. London: Royal Botanic Gardens, Kew.

Álvarez, José, et al. 2011. *Minería aurífera en Madre de Dios y contaminación con mercurio: Una bomba de tiempo*. Informe Preparado por el Instituto de la Amazonía Peruana – IIAP y el Ministerio del Ambiente. Lima: Editorial Súper Gráfica E.I.R.L.

Anaya Franco, Eduardo. 1996. "Las inversiones extranjeras directas en el Peru en el siglo XX (1897–1996)." *Revista de la Facultad de Ciencias Económicas* 1 (2): 45–61.

Apurinã, Francisco. 2015. *Nos caminhos da BR-364: Povo Huni Kui e a Terra Indígena Colônia 27*. Curitiba: Editora Prismas.

Baraloto, Christopher, et al. 2015. "Effects of Road Infrastructure on Forest Value Across a Tri-National Amazonian Frontier." *Biological Conservation* 191: 674–681.

Bleichmar, Danielle. 2016. "Botanical Conquistadors: The Promises and Challenges of Imperial Botany in the Hispanic Enlightenment." In *The Botany of Empire in the Long Eighteenth Century*, edited by Yota Batsaki, Sarah Burke Cahalan, and Anatole Tchikine. Washington, DC: Dumbarton Oaks.

Buccella, Alina. 2014. "Can the Minamata Convention on Mercury Solve Peru's Illegal Artisanal Gold Mining Problem?" *Yearbook of International Environmental Law* 24 (1): 166–187.

Campbell, Jeremy. 2012. "Between the Material and the Figural Road: The Incompleteness of Colonial Geographies in Amazonia." *Mobilities* 7 (4): 481–500.

Chirif, Alberto, ed. 2019. *Peru: Deforestation in Times of Climate Change*. Lima: Tarea Asociación Gráfica Educativa.

Cook, Harold J. 2008. *Matters of Exchange: Commerce, Medicine, and Science in the Dutch Golden Age*. New Haven, CT: Yale University Press.

Cortés-McPherson, Dolores. 2019. "Expansion of Small-Scale Gold Mining in Madre de Dios: 'Capital Interests' and the Emergence of a New Elite of Entrepreneurs in the Peruvian Amazon." *Extractive Industries and Society* 6 (2): 382–389.

Dammert, Juan Luis Bello. 2018. "Salvaguardas ambientales y sociales en el financiamiento de proyectos de infraestructura en la Amazonía sur del Perú." *Boston University Global Policy Development Center Working Papers* 17: 1–41.

Damonte, Gerardo. 2018. "Mining Formalization at the Margins of the State: Small-Scale Miners and State Governance in the Peruvian Amazon." *Development and Change* 49 (5): 1314–1335.

Davis, Wade. 1996. *One River: Explorations and Discoveries in the Amazon Rain Forest*. New York: Simon and Schuster.

Delgado, César. 2008. "Is the Interoceanic Highway Exporting Deforestation?" Master's thesis, Duke University.

Dourojeanni, Marc Jean. 2006. *Estudio de caso sobre la Carretera Interoceanica en la Amazonia Sur del Peru*. Washington, D C: Bank Information Center.

Economist. 2019. "Eastern Congo Has the World's Largest Quinine Plantations." *Economist*, June 8, 2019. https://www.economist.com/middle-east-and-africa/2019/06/08/eastern-congo-has-the-worlds-largest-quinine-plantations.

Espin, Johanna, and Stephen Perz. 2021. "Environmental Crimes in Extractive Activities." *Extractive Industries and Society* 8 (1): 331–339.

Fernández, Luis, et al. 2019. "Estimating Population Level Exposure to Methylmercury by Assessing Mercury Concentration in Wild-Caught Market Fish in the Peruvian Amazon." Paper given at the Fourteenth International Conference on Mercury as a Global Pollutant.

Gadea, Rosa Santa, ed. 2012. *Integración física sudamericana 10 años después: Impacto e implementación en el Perú*. Lima: Banco Interamericano de Desarrollo, Centro Peruano de Estudios Internacionales Universidad del Pacífica.

Galeano, Eduardo. (1970) 2009. *Las venas abiertas de América Latina*. Madrid: Siglo XXI.

Goldstein, Ruth. Forthcoming. "Life in Traffic: Riddling Fieldnotes on the Political Economy Of 'Sex' and Nature." *Cultural Anthropology* 37 (2).

Graeter, Stefanie. 2020. "Infrastructural Incorporations: Toxic Storage, Corporate Indemnity, and Ethical Deferral in Peru's Neoextractive Era." *American Anthropologist* 122 (1): 21–36.

Gray, Andrew. 2003. *Mythology, Spirituality, and History*. New York: Berghahn.

Harvey, Penny, and Hannah Knox. 2015. *Roads: An Anthropology of Infrastructure and Expertise*. Ithaca, NY: Cornell University Press.

Holland, Lynn. 2020. "Illegal Gold Mining and the Struggle to Save the Amazon in Peru." In *Frontiers of Development in the Amazon: Riches, Risks, and Resistances*, edited by Antonio Augusto Rossotto Ioris, Rafael R. Ioris, Sergei V. Shubin, 189–211. Lanham, MD: Lexington Books.

Jackson, Joe. 2008. *The Thief at the End of the World: Rubber, Power, and the Seeds of Empire*. New York: Viking.

Leguía Salcedo, Augusto Bernardino. 1912. “Mensaje del Presidente Constitucional del Perú, Augusto Bernardino Leguía Salcedo, al Congreso Nacional, el 28 de Julio de 1912.” https://www.congreso.gob.pe/participacion/museo/congreso/mensajes/mensaje_nacion_congreso_28_julio_1912.

Mackay, David. 2011. “Agents of Empire: The Banksian Collectors and Evaluation of New Lands.” In *Visions of Empire: Voyages, Botany, and Representations of Nature*, edited by David Philip Miller and Peter Hanns Reill, 38–57. Cambridge: Cambridge University Press.

Martinez, Gerardo, et al. 2018. “Mercury Contamination in Riverine Sediments and Fish Associated with Artisanal and Small-Scale Gold Mining in Madre de Dios, Peru.” *International Journal of Environmental Research and Public Health* 15: 1584.

Moore, Thomas. 2019. “Deforestation in Madre de Dios, Its Implications for First Peoples.” In *Peru: Deforestation in Times of Climate Change*, edited by Alberto Chirif, 201–236. Lima: Tarea Asociación Gráfica Educativa.

Müller, Birgit. 2022. “‘Don’t Look Up’: Political Ecology and the Denials of Environmental Governance.” *LASA Forum* 53 (1): 3–8.

Muniz, Tiago Silva Alves. 2020. “Ensaio sobre arqueologia do período da borracha no Baixo Amazonas: Materialidade, ontologia e patrimônio.” *Oficina do historiador* 13 (1): 1–17.

Paredes Pando, Óscar. 2013. *Explotación del Caucho-Shiringa, Brasil–Bolivia–Perú: Economías extractivo-mercantiles del Alto Acre–Madre de Dios*. Cusco, Peru: JL Editores.

Roberts, Carolyn. 2021. “Medicine, Knowledge, and Power in the Atlantic Slave Trade.” Recorded talk given at the New York Botanical Garden, July 7.

Schiebinger, Londa. 2004. *Plants and Empire: Colonial Bioprospecting in the Atlantic World*. Cambridge, MA: Harvard University Press.

Schiebinger, Londa. 2008. “The Art of Medicine: Exotic Abortifacients and Lost Knowledge.” *Lancet* 371: 718–719.

Tubb, Daniel. 2020. *Shifting Livelihoods: Gold Mining and Subsistence in the Chocó, Colombia*. Seattle: University of Washington Press.

United Nations. 2021. “World Drug Report 2021.” https://www.unodc.org/res/wdr2021/field/WDR21_Booklet_4.pdf.

USAID. 2019. “Illegal Gold Mining.” Last updated March 29, 2022. https://www.usaid.gov/peru/our-work/illegal-gold-mining.

Winchell, Mareike. 2018. “After Servitude: Bonded Histories and the Encumbrances of Exchange in Indigenizing Bolivia.” *Journal of Peasant Studies* 45 (2): 453–473. //

El problema del *"expertise"* y la necesidad de crear diálogos interculturales en desarrollo internacional

por **Tania Eulalia Martínez-Cruz** | Investigadora Asociada, Universidad Libre de Bruselas, Bruselas, Bélgica | tania.martinez.cruz@ulb.be

Introducción

El modelo agrícola dominante utilizado para combatir la inseguridad alimentaria no es sustentable ya que la agricultura por sí misma contribuye al 30% de la emisión de los gases de efecto invernadero (Fanzo y Downs 2021) y es responsable del 80% de la deforestación mundial (FAO 2017). Adicionalmente, las estadísticas indican que mientras 811 millones de personas en el mundo sufren hambre (FAO, Bioversity International y CIAT 2021), 1 900 millones de adultos padecen sobrepeso (WHO 2021). Un interrogante ante este escenario de salud pública y crisis climática, pese a la inversión en nombre del desarrollo, es: ¿qué nos llevó a estas crisis? Si consideramos el rol de la ciencia y tecnología para retroalimentar la política pública, ¿valdría la pena pensar qué conocimientos, qué ciencia, qué tecnología y con qué fines? No pretendo abundar en cada interrogante, pero sí reflexionar, desde mi experiencia en algunos rincones de América Latina, sobre el llamado *expertise* y nuestro papel como investigadores de cara a una genuina extensión del desarrollo a las comunidades necesitadas, pero considerando el papel del conocimiento indígena para resolver retos globales.

¿Maíz o milpa para resolver la seguridad alimentaria?

Hace más de 10 años trabajé para una ONG que busca aumentar la seguridad alimentaria de México bajo la lógica del incremento del rendimiento del maíz (alimento básico). La iniciativa asumía muchas cosas: la productividad como sinónimo de seguridad alimentaria, que el menú de tecnologías predefinido era adecuado para la gran diversidad de realidades agrícolas en México, y que adaptación era sinónimo de participación; es decir, las tecnologías servirían tanto a los agricultores con una escala de tecnificación alta en Sinaloa como a aquellos de maíz nativo en los Altos de Chiapas, y sólo bastaba adaptarlas a sus contextos.

Me encontraba en una comunidad indígena de los Altos de Chiapas, buscando entender las necesidades de los campesinos para poder resolver sus retos con ofertas tecnológicas llamadas "sustentables", o más bien, ajustar las tecnologías a su realidad, pues "las soluciones ya estaban predefinidas por un grupo de expertos en un menú tecnológico". En esa zona podíamos ver las parcelas cubiertas de milpas, un sistema de policultivo tradicional de maíz (una o más variedades) intercalado con papa, calabaza, frijol y otros cultivos de valor alimenticio, medicinal o cultural. Ante los ojos del experto, esa parcela era ineficiente: "*¿Por qué la gente siembra cada dos metros? ¿Podemos cambiar las semillas por unas que tengan un mejor rendimiento? Si nuestra misión es mejorar la seguridad alimentaria de México, la respuesta es fácil: con nuevas variedades de maíz y un mejor arreglo topológico podemos hacerlo*". Lo que no podíamos ver como expertos era la riqueza de la milpa, al tiempo que ignorábamos el

"expertise" de los pueblos indígenas, dónde maíz, frijol y calabaza tienen una función específica en la milpa. El maíz da soporte al frijol, el frijol fija nitrógeno al suelo y la calabaza previene la erosión. Además, provee alimentos a lo largo del año, ya que en la parcela hay raíces o hierbas que pueden cosecharse cuando no hay maíz. Los pueblos indígenas conocen el temporal y saben qué cosechar, cuándo y con qué propósito, además que la milpa es un elemento social de la vida comunitaria (Martínez-Cruz 2020).

Uno de los problemas al apoyar paradigmas dominantes como el enfoque hacia la productividad del ejemplo inicial, basado en soluciones tecnológicas dónde el experto sabe mejor lo que se tiene que hacer que los pueblos indígenas, es que acrecentamos la desigualdad e inequidad. Como bien indica Fox y Haight (2010), en México hemos perpetuado la desigualdad a través de la política pública agrícola, ya que los programas o lineamientos de operación se han enfocado a un tipo de agricultores comerciales, mientras otros han sido relegados, específicamente los indígenas. Así, el potencial productivo y la seguridad alimentaria se han planteado en términos del uso de semillas mejoradas, fertilizantes químicos o mejoras tecnológicas, que sustituyen al maíz nativo o saberes locales como la milpa por ser catalogados como ineficientes; en las palabras de muchos, considerada una trampa de pobreza, ya que los expertos no han valorado la riqueza y complejidad de estos saberes indígenas.

Con conocimiento de los "expertos" me refiero al basado en universidades tradicionales, como las occidentales, donde muchos nos formamos, y con "expertos locales" a los saberes intergeneracionales de los pueblos indígenas.

La ilusión de la participación

En la mayoría de los proyectos en los que he colaborado a lo largo de los años en instituciones internacionales, la palabra "participación" resuena con la intención de crear proyectos más inclusivos y romper con el legado de la Revolución Verde que refería a prescripciones de los expertos "top-down" (vertical). Sin embargo, en muchos de los casos el enfoque sigue siendo "top-down" porque asumimos que el "experto sabe" y el agricultor o los pueblos indígenas deben ser receptores y estar abiertos a ese "expertise". Cuando abrazamos la palabra "participación" pareciera que se hace también para poder conseguir financiamiento, ya que la agricultura y la seguridad alimentaria se han vuelto una actividad altamente política (Sumberg, Thompson y Woodhouse 2013) que debe cubrir muchas agendas a la vez.

Quizá uno de los sueños de quienes estamos involucrados en este mundo del "expertise" en desarrollo internacional es la idea de la participación, pero pareciera sólo una ilusión que no llega porque (sin justificarnos) nos vemos atrapados en las dinámicas de los donantes-políticos que piden soluciones rápidas o una inversión redituable para poder mostrar el éxito de sus iniciativas (Sumberg, Irving y Adams 2011); mientras no hay espacio para aprender sobre la práctica, ya que los fracasos o las lecciones aprendidas durante el desarrollo tienen poco espacio para ser valoradas (Martínez-Cruz et al. 2020), y difícilmente un donante financiará algo que se plantee en términos de potencial "fracaso". Particularmente, cuando los proyectos involucran a los pueblos indígenas, la palabra "participación" ha implicado únicamente la validación de agendas políticas sin necesariamente incluir o involucrar voces o saberes indígenas como iguales (McAlvay et al. 2021). Sigue existiendo un favoritismo hacia conocimientos y agendas específicas determinadas por las personas autodenominadas expertas del desarrollo internacional, muchas veces guiadas por sus deseos o gustos personales.

Las reflexiones sobre la participación son necesarias no sólo en el desarrollo internacional al implementar un proyecto, sino también cuando realizamos investigación. Por ejemplo, hace un par de años, mientras trabajaba en nutrición, constantemente se oía la palabra "participación" sin embargo, el proyecto más que construir agendas colectivas parecía un espacio del que "aprenderíamos" con la intención de mejorar sus prácticas de nutrición desde nuestra perspectiva. Algunos colegas argumentaban que uno de

los problemas de la nutrición estaba ligado al tema de las porciones y lo poco que los infantes tomaban de los platos colectivos, que era el principal sistema alimenticio. Entonces, una de las recomendaciones era dar platos individuales a las comunidades para que pudieran racionar la comida y, por lo tanto, mejorar la cantidad de alimentos consumidos. Por un lado, puedo entender la lógica de pensar en las raciones, pero por otro, pensaba que nos faltaba entender el sentido colectivo de la comida. Pensar en esta historia me lleva al Mä'ätsy en los Mixes (Oaxaca) como un plato colectivo usado en celebraciones rituales. Plato colectivo consiste en tortillas gruesas de maíz sobre un plato de barro precalentado y bañado en salsa. Se acompaña con alimentos de la milpa como el quelite. En Tamazulápam se consume para celebrar la vida del nacimiento y pedir cosechas abundantes el primero de agosto, entre otros. Al igual que en muchos proyectos de desarrollo, la investigación también parte del supuesto de saber mejor que las comunidades lo que es mejor para ellas. Aunque el concepto de participación se enuncia comúnmente, normalmente no se pone en práctica.

Intentando enseñar a los "expertos"

Los expertos locales también intentan enseñarnos a los expertos, pero quizá nos hace falta más *desarrollar* la capacidad de escuchar, realmente escuchar antes de disminuir o desechar la opinión de nuestros interlocutores. En otro proyecto relacionado con la seguridad alimentaria, conversaba con un líder indígena sobre la necesidad de tener enfoques interculturales para resolver problemas de desnutrición. Él trataba de explicarme que los expertos no teníamos ni la habilidad ni la disposición de entender otras formas de hacer las cosas: "*Imagínate que un día, reunido con la Ministra de Desarrollo, desde la selva le llevé unos preciosos gusanos que además son sagrados para nosotros. Se los dejé en la mesa y le dije que era nuestro presente para ella. Ella gritó horrorizada y me preguntó qué esperaba yo que ella hiciera con esos insectos. Entonces le dije que así como ella se sentía, nos sentimos* [nosotros] *cada vez que alguien viene y nos impone comer algo y no nos escucha primero*".

En la mayoría de proyectos, los expertos, partimos del supuesto (o juicio previo, o incluso prejuicio) de que nuestras recomendaciones son mejores que lo que existe o de lo que saben los beneficiarios de esos proyectos, en especial los indígenas. La realidad es que nos falta entender la complejidad de sus modos de vida y saberes, e incluso otras dinámicas relacionadas con el tema: valor cultural, relaciones económicas, e incluso apreciaciones ontológicas respecto a esas recomendaciones. Por ejemplo, a nivel internacional hemos promovido principalmente tres cultivos que aportan el 60% del contenido calórico de las dietas "optimizadas" que son trigo, maíz y arroz, junto con 25 cultivos más que conforman el 90% del aporte calórico de las dietas a nivel mundial (Chivenge et al. 2015). Se ha encontrado que hay sistemas alimentarios indígenas que pueden tener más de 250 alimentos a lo largo del año, con otros usos más que el meramente calórico (medicinal, ritual, etc.). Evidentemente, esas recomendaciones implican un empobrecimiento nutricional, agronómico y ecosistémico de sus dietas. Un ejemplo práctico son los sistemas alimentarios de los pueblos indígenas de las Islas Solomon, que tienen hasta 238 alimentos de 127 diferentes especies, incluyendo los plátanos fe'i que contienen más vitamina A que un plátano común del supermercado (FAO, Bioversity International y CIAT 2021). De igual manera, los pueblos Inuit pueden obtener de sus sistemas locales dietas ricas en vitamina D y muestran cómo el desplazamiento de sus territorios afecta negativamente a su salud, ya que dependen más del mercado exterior y menos de sus alimentos locales (Kuhnlein 2018). Aunque puede parecer sólo un formalismo de cambio de hábitos nutricionales, tiene implicaciones sociales, políticas, económicas e incluso morales en sus relaciones internas y hacia el exterior, además del riesgo de pérdida biológica e incremento de riesgos climáticos o de abastecimiento tanto alimenticio como de insumos necesarios para su producción.

¿Podemos coproducir conocimiento?

De manera más abierta, se ha avanzado en el reconocimiento del conocimiento indígena para resolver retos globales, en especial con la crisis climática, ya que se reporta que el 80% de la biodiversidad que existe en el mundo se encuentra custodiada por los pueblos indígenas, que representan el 6% de la población mundial en menos del 25% del territorio mundial (Sobrevila 2008). Sin embargo, falta establecer un dialogo de saberes equitativo entre la ciencia moderna y el saber indígena, ya que normalmente la primera tiende a validar el conocimiento indígena y busca establecer una equivalencia de uno a uno, pero difícilmente de la otra manera. Un problema con las equivalencias uno a uno y la validación del conocimiento indígena es que hay conocimientos que son manejados y sistematizados mejor por los expertos locales debido a matices y apreciaciones culturales, y si el conocimiento científico no tiene noción de esos matices, dicho conocimiento indígena quedaría fuera (o se perdería) (Nabhan 2000). Los Seris, en México, tienen una gran variedad de moluscos que clasifican dentro de su cultura, pero que no existen dentro del conocimiento occidental o se reportan como extintos (Wilder et al. 2016). Inclusive si esto es cierto a nivel técnico, culturalmente tiene un valor que influye en el resto de su estructura nutricional y social.

El conocimiento indígena se sistematiza mayormente de forma oral, y cuando las lenguas o sus hablantes desaparecen, también todo su conocimiento se pierde. Se dice que en el mundo cada 3.5 meses desaparece una lengua indígena (Rogers y Campell 2015), y que algunos estudios indican que hay una relación entre la diversidad biológica y lingüística. El 70% de las lenguas que existen hoy se hablan en el 24% de la superficie del mundo y estas regiones son consideradas altamente diversas (Gorenflo et al. 2012). Es necesario pensar de qué manera el conocimiento indígena y sus guardianes son preservados si queremos seguir gozando de estos beneficios en el mundo.

Una forma para comenzar a construir enfoques más inclusivos es ser autoreflexivos como expertos y ser críticos sobre lo que entendemos respecto a la tecnología y el conocimiento, y sus implicaciones. Podríamos partir de la definición de Richards (2009) donde tecnología es todo aquello que permite lograr un fin o hacer algo ya sea material o inmaterial, sin discriminar si es bueno, malo, mejor, eficiente o ineficiente. Las tecnologías cobran un sentido social y toman diferentes significados (Nowotny 2006) como herramientas. Por ejemplo, una semilla de maíz puede para un fitopatólogo tener un grupo de genes resistente a enfermedades específicas, para un hacedor de política pública ayudar a combatir la desnutrición en un costo razonable, y para alguien como mi abuela, que era una sabia Ëyuujk, podría ser ese maíz sagrado que permite guiar la vida espiritual de un pueblo. Aquí ya no estamos jerarquizando ni atribuyendo que un fin o una concepción es superior o inferior. Si existe y cumple una función en la vida de las personas, entonces tiene un valor.

Entender los diferentes valores de los saberes permite contextualizar, colaborar mejor y hacer recomendaciones más sensibles. Hacia el 2016 conocí a Juan, un ingeniero agrónomo, y a los habitantes de un pueblo indígena en las montañas de Oaxaca que aún cultivaban maíz, pero no eran autosuficientes; cultivaban para los rituales o celebraciones, mientras compraban el resto del maíz en las tiendas locales. En algún momento, la comunidad sufrió los estragos de una sequía y un huracán, ya que, aunque tenían dinero para comprar el maíz, no había dónde comprarlo debido a la incomunicación generada por el huracán (destrucción de caminos). Juan inicialmente sugirió que emplearan semillas que rindieran más y que se cambiara la densidad de siembra. La comunidad le hizo ver que ellos necesitaban sus semillas nativas, una densidad de siembra adecuada y que considerara la milpa como un todo por su papel como fuente de alimento a lo largo del año y otras funciones en la comunidad. Conforme pasó el tiempo, juntos desarrollaron un sistema milpa que mantiene la diversidad de cultivos, ha incorporado elementos como riego, micorrizas para mejorar el enraizamiento del maíz, abonos orgánicos,

etcétera. El sistema de milpa actual les ha permitido ser autosuficientes otra vez y combinar sus hábitos de vida como migrantes temporales. Juan comenta que uno de los problemas que ha visto en términos de política pública y recursos es que pocas veces se invierte en la milpa o maíz nativo como una alternativa de seguridad alimentaria, y que cuando se ve al maíz nativo se le ve como un *pool* de genes que hay que conservar sin ver toda su complejidad.

Durante el COP26 en Glasgow, varios pueblos indígenas mostraron cómo los diferentes saberes y tecnologías pueden coexistir. Un ejemplo es el pueblo Selkup, que combina los sistemas de información geográfica para monitorear el cambio de uso de suelo, el incremento de los niveles de mar y otros factores más para hacer recomendaciones y estrategias que le permita adaptarse a los cambios (Shulbaeva 2021).

Hacia sistemas más sustentables dónde coexistan el conocimiento indígena y el moderno

En términos de seguridad alimentaria y cambio climático, durante la Cumbre Mundial de la Alimentación en el 2021 (United Nations Food Systems Summit 2021) se recomendó como una forma de proponer políticas incluyentes las políticas interculturales y partiendo desde la educación. Esta recomendación fue el resultado de 60 contribuciones plasmadas en el *Libro blanco de sistemas alimentarios de los pueblos indígenas*, que refleja las experiencias de pueblos indígenas y otros actores, y que ha sido reconocido como un acercamiento intercultural que resalta el rol del conocimiento indígena (FAO 2021). Sin embargo, uno de los retos más grandes para poder hacer políticas interculturales o inclusivas está en reconocer en que ambos conocimientos pueden dialogar como iguales (Burford 2012; Milbank et al. 2021), donde el experto no valida al local, sino que construyen juntos.

En México han existido políticas educativas que, aunque han significado un progreso a la hora de reconocer o incluir el rol de las lenguas indígenas, no necesariamente ha significado reconocer los diferentes saberes, por lo que hay un desplazamiento lingüístico y cultural (De Leon 2017; Mendoza-Zuany 2020). Además, la educación intercultural no está garantizada en todos los niveles. Se requiere reconocer el papel de la ciencia en retroalimentar la política pública, así como una política intercultural basada en una educación intercultural no sólo para los pueblos indígenas sino para quienes nos involucramos como expertos en el desarrollo internacional con la finalidad de tener un diálogo entre saberes y construir una genuina participación. Por otra parte, debemos apostar en que más personas indígenas sean parte de los grupos de expertos que forman e influyen en la política pública. Esa diversidad de voces y entendimientos nos permitirá "construir un mundo donde quepan muchos mundos", como dicen los Zapatistas.

Agradecimientos: La autora agradece los comentarios de Levi Adelman, Kata Beilin y la edición de Adair Zepeda.

Referencias

Burford, G., S. Kissmann, F. J. Rosado-May, S. H. Alvarado Dzul y M. K. Harder. 2012. "Indigenous Participation in Intercultural Education: Learning from Mexico and Tanzania". *Ecology and Society* 17 (4): 33.

Chivenge, Pauline, Tafadzwanashe Mabhaudhi, Albert T. Modi y Paramu Mafongoya. 2015. "The Potential Role of Neglected and Underutilised Crop Species as Future Crops under Water Scarce Conditions in Sub-Saharan Africa". *International Journal of Environmental Research and Public Health* 12 (6): 5685–5711.

De Leon, Lourdes. 2017. "Indigenous Language Policy and Education in Mexico". En *Language Policy and Political Issues in Education*, 3ª ed., ed. Teresa L. McCarty y Stephen May, 415–433. Cham: Springer International.

Fanzo, Jessica C., y Shauna M. Downs. 2021. "Climate Change and Nutrition-Associated Diseases". *Nature Reviews Disease Primers* 7, art. 90. https://doi.org/10.1038/s41572-021-00329-3.

FAO. 2017. *The Future of Food and Agriculture: Trends and Challenges.* Rome: FAO.

FAO, Bioversity International y CIAT. 2021. *Indigenous Peoples' Food Systems: Insights on Sustainability and Resilience in the Front Line of Climate Change*. Rome: FAO. https://doi.org/10.4060/cb5131en.

FAO. 2021. *The White/Wiphala Paper on Indigenous Peoples' Food Systems.* Rome: FAO. https://doi.org/10.4060/cb4932en.

Fox, Jonathan, y Libby Haight, eds. 2010. *Subsidizing Inequality: Mexican Corn Policy since NAFTA*. 9–50. Mexico City: Woodrow Wilson International Center for Scholars; Centro de Investigación y Docencia Económicas; University of California, Santa Cruz.

Gorenflo, L. J., S. Romaine, R. A. Mittermeier y K. Walker-Painemilla. 2011. “Co-occurrence of Linguistic and Biological Diversity in Biodiversity Hotspots and High Biodiversity Wilderness Areas”. *Proceedings of the National Academy of Sciences* 1209 (21): 8032–8037.

Kuhnlein, H. 2018. “Vitamin D Intake by Indigenous Peoples in the Canadian Arctic”. *Public Health Nutrition* 21 (11): 1986–1987. https://doi.org/10.1017/S1368980018000411.

McAlvay, A., C. Armstrong, J. Baker, et al. 2021. “Ethnobiology Phase VI: Decolonizing Institutions, Projects, and Scholarship”. *Journal of Ethnobiology* 41 (2): 170–191.

Martínez-Cruz, Tania Eulalia. 2020. Introduction in “On Continuities and Discontinuities: The Making of Technology-Driven Interventions and the Encounter with the MasAgro Programme in Mexico”. PhD thesis, Wageningen University. https://doi.org/10.18174/508387.

Martínez-Cruz, T. E., .T. C. Camacho Villa, C. J. M. Almekinders, and B. Govaerts. 2020. “The Making of a Technology-Driven Intervention: Mas-Agro Programme.” In Martínez-Cruz, “On Continuities and Discontinuities: The Making of Technology-Driven Interventions and the Encounter with the MasAgro Programme in Mexico,” chap. 2.

Mendoza-Zuany, Rosa Guadalupe. 2020. “Inclusion Is Not Interculturality: Suppositions Displacing Indigenous Education in Mexico”. *Journal of Intercultural Studies* 41 (5): 591–606. https://doi.org/10.1080/07256868.2020.1806806.

Milbank, C., B. Burlingame, D. Hunter, et al. 2021. “Rethinking Hierarchies of Evidence for Sustainable Food Systems”. *Nature Food* 2: 843–845.

Nabhan, Gary Paul. 2000. “Interspecific Relationships Affecting Endangered Species Recognized by O’odham and Comcáac Cultures”. *Ecological Applications* 10 (5): 1288–1295.

Nowotny, Helga. 2006. “Introduction”. En *Cultures of Technology and the Quest for Innovation*, ed. Helga Nowotny, 1–23. New York: Berghahn Books.

Richards, Paul. 2009. “Dressed to Kill: Clothing as Technology of the Body in the Civil War in Sierra Leone”. *Journal of Material Culture* 14 (4): 495–512. https://doi.org/10.1177/1359183509345950.

Rogers, Chris, y Lyle Campbell. 2015. “Endangered Languages”. En *Oxford Research Encyclopedia of Linguistics*. https://doi.org/10.1093/acrefore/9780199384655.013.21.

Shulbaeva, Polina. 2021. Presentation at “Earth Observation-Based Innovation by and for Indigenous Women for Climate Change Adaptation”. Session at COP26, Green Pavilion, 9 de noviembre de 2021. YouTube video, https://www.youtube.com/watch?v=4Pp5IpBZiUQ.

Sobrevila, Claudia. *The Role of Indigenous Peoples in Biodiversity Conservation: The Natural but Often Forgotten Partners (English).* Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/995271468177530126/The-role-of-indigenous-peoples-in-biodiversity-conservation-the-natural-but-often-forgotten-partners.

Sumberg, James, R. Irving y E. Adams. 2011. “Success-Making and Success Stories”. En *Contested Agronomy: Agricultural Research in a Changing World*, ed. James Sumberg y John Thompson, 186–203. London: Routledge.

Sumberg, James, John Thompson y Philip Woodhouse. 2013. “Why Agronomy in the Developing World Has Become Contentious”. *Agriculture and Human Values* 30: 71–83. https://doi.org/10.1007/s10460-012-9376-8.

Wilder, Benjamin T., Carolyn O’Meara, Laurie Monti y Gary Paul Nabhan. 2016. “The Importance of Indigenous Knowledge in Curbing the Loss of Language and Biodiversity”. *BioScience* 66 (6): 499–509. https://doi.org/10.1093/biosci/biw026.

WHO (World Health Organization). 2021. “Obesity and Overweight”. World Health Organization, 9 de junio de 2021. https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight. //

Las humanidades ambientales y la transdisciplinariedad en la universidad

por **Jorge Marcone** | Professor, Department of Spanish and Portuguese and Program in Comparative Literature, Associate Dean of Humanities, Rutgers University–New Brunswick | jorge.marcone@rutgers.edu

Desde setiembre del 2021, en la universidad de la que soy miembro (Rutgers–New Brunswick, una de las sedes de la universidad estatal del Nueva Jersey), tiene lugar una amplia y sostenida conversación preliminar sobre el plan académico que debe regir e inspirar la educación e investigación en los próximos años. La conversación ha involucrado a estudiantes, empleados, autoridades y profesores e investigadores. Es, sin embargo, una conversación que está ocurriendo, ha ocurrido y ocurrirá en otras universidades públicas e instituciones privadas en los Estados Unidos. Sé también, por comentarios de colegas cercanos en México, Perú y Uruguay, que no es una conversación a la que sean indiferentes las instituciones académicas en América Latina.

En esta conversación sobre el futuro a mediano y largo plazo de la universidad, motivada tanto por el reconocimiento, dentro y fuera de la institución, de injusticias raciales y sociales sistemáticas como por la adaptación a una nueva etapa de la pandemia, me ha sorprendido el énfasis con el que se han hecho ciertas propuestas. Son muchos los actores en el campus que han expresado su apoyo decidido a fomentar la investigación interdisciplinaria, pero con la novedad de dirigirla al estudio de problemas concretos y sus soluciones, y con la participación de las comunidades involucradas en la cocreación de conocimiento. Es decir, me ha sorprendido la enorme popularidad y hasta cierto consenso, no solo entre investigadores y estudiantes sino entre las autoridades, de aquello que en los estudios de sostenibilidad y resiliencia social-ecológica es conocido desde hace buen tiempo ya con el nombre de transdisciplinariedad. Entiendo que circulan varias definiciones de este término que, aunque no son equivalentes, se entrecruzan. En esta ocasión me refiero a una forma de aprender y de solucionar problemas, o de fortalecer la capacidad de respuesta de los afectados para lidiar con ellos, que involucra la cooperación de distintos sectores de la sociedad y de las instituciones universitarias y de investigación para lidiar en la práctica con desafíos complejos (Scholz 2020). La ideología que ha promovido en años recientes que la universidad sea emprendedora, cuyo conocimiento esté al servicio de la industria privada y de las agencias gubernamentales, y en general que contribuya al crecimiento de la economía parece que no será más la única corriente de opinión decidiendo políticas universitarias. En esta conversación he percibido, en cambio, una voluntad por fomentar y llevar a cabo prácticas de investigación y enseñanza más democratizadoras y orientadas hacia la solución de problemas específicos para el bienestar de las comunidades. Y esta voluntad en los distintos estamentos de la universidad está pujando para transformar la institución de una universidad "para la sociedad" a otra que también pueda ser una universidad "con la sociedad".

Esta voluntad de cambio ha resultado ser menos marginal de lo que imaginaba. En verdad, ya había señales que la anunciaban. Desde nuestra Vicepresidencia para Asuntos Académicos circula desde hace un buen tiempo ya una definición clara de "publicly engaged scholarship", o de "investigación comprometida con el bienestar público". Es una definición a la cual recurrir en el momento de decidir ascensos y promociones.

Para satisfacer esa definición, la investigación bajo evaluación debe caer dentro del área de especialización del investigador, debe ser innovadora, debe beneficiar a una comunidad fuera del campus, debe ser visible en los círculos académicos, pero también compartida con los actores sociales involucrados. Y, sobre todo, debe ser colaborativa. La participación de la comunidad en el proyecto de investigación es parte del método y del propósito del proyecto y no es simplemente una actividad separada y suplementaria. No es que quiera hacer virtud de una deficiencia personal, pero mi sorpresa con el protagonismo de este giro en mi propio campus bien puede ser el síntoma de cierta ambigüedad de las humanidades con la transdisciplinariedad, o las "humanidades públicas", y de nuestra falta de curiosidad con las transformaciones profundas en otras disciplinas.

Como en tantas otras instituciones universitarias, del Norte y del Sur, mis colegas en Rutgers–New Brunswick se enorgullecen del nivel de sus disciplinas en STEM (ciencia, tecnología, ingeniería y matemáticas, por sus siglas en inglés). Y se llenan de energía pensando, no sin razón, que sus investigaciones pueden ser esenciales para la solución de problemas críticos del siglo XXI. No obstante, encuentro que comunican con la misma claridad que, para enfrentar estos problemas, la excelencia académica en una disciplina o campo de estudios no es suficiente. Más aún, están afirmando que las colaboraciones interdisciplinarias ya convencionales tampoco lo son, y que hay barreras institucionales que superar de cara al futuro. A pesar de que nunca faltan los escépticos de la investigación interdisciplinaria, sus desafíos actuales son menos de filosofía de la ciencia y más de la organización y administración de las instituciones. El reclamo es establecer puentes de comunicación entre departamentos académicos y cualquier otro tipo de unidades, especialmente para la colaboración entre unidades académicas dispares entre sí y para encontrar caminos de convergencia en áreas muy necesarias. La necesidad más recurrentemente invocada es la de incrementar la competencia cultural en todas las disciplinas. No ha habido decano de alguna de nuestras escuelas profesionales que no haya declarado su interés en fomentar más colaboraciones con las artes y las humanidades.

Como la universidad estatal de una región de los Estados Unidos con una gran diversidad étnica y cultural y de gran densidad demográfica, mis colegas en Rutgers-New Brunswick están convencidos de que la transdisciplinariedad empieza por casa. Estoy seguro que mis colegas de otras universidades públicas estadounidenses y canadienses y latinoamericanas coincidirán que este tipo de diversidad también las coloca a ellas en una posición única para la creación de conocimiento que se apoye en la diversidad de experiencias de vida que caracterizan a nuestros países. La labor empieza por casa, y es fundamental para aquella investigación que aspire a tener un impacto en el bienestar de nuestras comunidades.

Si una conversación como la que se está llevando a cabo en Rutgers estos días termina efectivamente en un plan definido y en una política consistente, es algo que pronto descubriremos. Y a mediano plazo descubriremos también qué tan fuerte puede ser la resistencia, dentro y fuera del campus, a estas maneras de definir la misión de la universidad. Me temo que este giro o apertura institucional no va a encontrar a las humanidades ambientales enfocadas en América Latina a la vanguardia de este cambio. La transdisciplinariedad dista bastante de ser parte de la formación de la próxima generación de investigadores y docentes universitarios en esta área de estudios. Veo aún mucha vacilación sobre si la formación para la investigación literaria y cultural deba promover proyectos de investigación en los cuáles se identifiquen comunidades que serían beneficiadas o perjudicadas por esa investigación, participen desde el diseño de las preguntas, el monitoreo de la investigación, y la difusión del conocimiento que surja de la investigación. En cuanto a la colaboración con disciplinas dispares, por ejemplo, entre microbiología y estudios culturales, que subyacen a tantas cuestiones ambientales, no

solo no pareciera ser atractiva para estudiantes y profesores de las humanidades, sino que aunque lo fueran son difíciles de iniciar y establecer.

Esta situación no deja de ser una contradicción si tenemos en cuenta las definiciones aspiracionales de las humanidades ambientales. "Humanidades ambientales" es hoy un término general para reconocer varias conversaciones sobre la interacción entre naturaleza, por un lado, y sociedad y cultura, por el otro que tienen y han tenido lugar en filosofía, educación, historia, historia del arte, crítica literaria, estudios culturales, estudios de género, estudios poscoloniales y decoloniales, geografía cultural, antropología y ecología política. La historia ambiental surgió en los años setenta del siglo pasado, y la ecocrítica y el movimiento por la justicia ambiental se hicieron conocidos en los noventa, por ejemplo. Sin embargo, históricamente, la propuesta de unas "humanidades ambientales" surgió hace unos quince años como un llamado de las ciencias de la resiliencia y la sostenibilidad a la colaboración con humanistas para la investigación de las costumbres, preferencias, valores morales, creencias espirituales, identidades, sabidurías, estéticas, epistemologías, ontologías, memoria cultural, ideas de bienestar, y comunicación. El propósito de la colaboración sería explicar o facilitar transiciones social-ecológicas en situaciones concretas y en comunidades particulares, y en circunstancias en las que las identidades humanas se redefinen con la conciencia de estar inmersos en complejidades y hasta comunidades cuyos actores son también seres no humanos (Nye et al. 2013). El concepto de "humanidades ambientales" surgió, entonces, no solo como un proyecto interdisciplinario sino también como un proyecto transdisciplinario. A diferencia de la historia del término "ecocrítica", surgido en los estudios literarios anglófonos, con "humanidades ambientales" las ciencias ambientales se hacían una crítica a sí mismas. Se convocaban a la sinergia de la que emergen ideas más complejas que la suma de sus partes con otros actores en las humanidades y las artes, dentro y fuera de la academia, para la investigación y la comunicación necesarias de problemas ambientales particulares.

Hoy por hoy, más allá de que reconozcamos o no esta aspiración fundamental de las humanidades ambientales, las transformaciones que podrían ocurrir en los próximos meses y años en la universidad nos obligará a plantearnos algunos desafíos para las humanidades ambientales, especialmente en los estudios de literatura, cine y arte. Bajo la definición particular de transdisciplinariedad y de "investigación comprometida con el bienestar público" presentadas más arriba, no creo que estas humanidades ambientales estén trabajando decididamente bajo esos parámetros de cooperación y de orientación a la solución de problemas "sobre el terreno".

Las humanidades ambientales en los estudios literarios y culturales latinoamericanos ya no son más un campo de estudio emergente. Miro algunos títulos que tengo a la mano, leídos o por leer por completo (debo confesar), que creo que vale la pena compartir con los colegas, de cualquier disciplina, interesados en cuestiones ambientales. Son 22, publicados desde 2016. Monografías, colecciones de ensayos académicos, números monográficos de prestigiosas revistas, antologías y traducciones literarias. ¡16 de ellos han sido publicados a partir del 2019!

Jens Andermann, *Tierras en trance: Arte y naturaleza después del paisaje* (Santiago de Chile: Ediciones Metales Pesados, 2018).

Mark Anderson y Zélia Bora, eds., *Ecological Crisis and Cultural Representation in Latin America: Ecocritical Perspectives on Art, Film, and Literature* (Lanham, MD: Lexington Books, 2016).

Kata Beilin, Kathleen Connolly y Micah McKay, eds., 2019. *Environmental Cultural Studies through Time: The Luso-Hispanic Worlds* (*Hispanic Issues Online*, vol. 24).

Esthela Calderón, *Los huesos de mi abuelo = The Bones of My Grandfather: (Eco-poesía sin fronteras): antología poética bilingüe, español-inglés*, editado y traducido por Steven White (Madrid: Amargord, 2018).

Pablo Chiuminatto y Andrea Casals Hill, *Futuro esplendor: Ecocrítica desde Chile* (Santiago de Chile: Orjikh Editores, 2019).

Scott M. DeVries, *Creature Discomfort: Fauna-Criticism, Ethics, and the Representation of Animals in Spanish American Fiction and Poetry* (Leiden: Brill, 2016).

Juan Duchesne Winter, *Plant Theory in Amazonian Literature* (New York: Springer, 2019).

Carolyn Fornoff, Bethany Wiggin y Patricia Eunji Kim, eds., *Timescales: Thinking across Ecological Temporalities* (Minneapolis: University of Minnesota Press, 2020).

Jennifer French y Gisela Heffes, eds., *The Latin American Ecocultural Reader* (Evanston, IL: Northwestern University Press, 2020).

Gisela Heffes and Carolyn Fornoff, eds., *Pushing Past the Human in Latin American Cinema* (Albany: State University of New York Press, 2021).

Héctor Hoyos, *Things with a History. Transcultural Materialism and the Literatures of Extraction in Contemporary Latin America* (New York: Columbia University Press, 2019).

Ilka Kressner, Ana María Mutis y Elizabeth Pettinaroli, eds., *Ecofictions, Ecorealities, and Slow Violence in Latin America and Latinx World* (New York: Routledge, 2020).

José Manuel Marrero Henríquez, ed., *Hispanic Ecocriticism* (New York: Peter Lang, 2019).

Felipe Martínez Pinzón, *Una cultura de invernadero: trópico y civilización en Colombia* (Madrid: Iberoamericana, 2016).

Felipe Martínez Pinzón y Javier Uriarte, eds., *Intimate Frontiers: A Literary Geography of the Amazon* (Liverpool: Liverpool University Press, 2019).

Charlotte Rogers, *Mourning El Dorado: Literature and Extractivism in the Contemporary American Tropics* (Charlottesville: University of Virginia Press, 2019).

Victoria Saramago, *Fictional Environments. Mimesis, Deforestation, and Development in Latin America* (Evanston, IL: Northwestern University Press, 2021).

Amanda M. Smith, *Mapping the Amazon: Literary Geography after the Rubber Boom* (Liverpool: Liverpool University Press, 2021).

Javier Uriarte, *The Desertmakers: Travel, War, and the State in Latin America* (New York: Routledge, 2020).

Patrícia Vieira y Víctor Mendes, eds., *Portuguese Literature and the Environment* (Lanham, MD: Lexington Books, 2019).

Patrícia Vieira, Monica Gagliano y John C. Ryan, eds., *The Language of Plants: Science, Philosophy, Literature* (Minneapolis: University of Minnesota Press, 2017).

Lesley Wylie, *The Poetics of Plants in Spanish American Literature* (Pittsburgh: University of Pittsburgh Press, 2020).

La lista no pretende ser exhaustiva, pero sí abrumadora. Mis colegas en humanidades ambientales extrañarán algunos títulos fundacionales anteriores al 2016. Y estos colegas también saben que más disertaciones doctorales están en camino. No soy capaz en este momento de dar cuenta de publicaciones en América Latina. Aunque sí quisiera llamar la atención sobre *Tekoporá. Revista latinoamericana de humanidades ambientales y estudios territoriales*, iniciada también en 2019 y que ha publicado ya seis números.

Las publicaciones que he listado antes son un ejemplo de lo que Joni Adamson (2016) llama “Humanities of the Environment”, o “humanidades sobre/del ambiente”. Y que se distinguen de las “Humanities for the

Environment", o "humanidades para/por el ambiente" que es lo que antes he llamado aquí transdisciplinariedad. Las primeras responden a los protocolos de investigación habituales en las humanidades, por ejemplo, la autoría de un solo autor, la audiencia disciplinar o producir conocimiento "para la sociedad" pero no con otros actores sociales a pesar de facilitar el reconocimiento "académico" de sus saberes. Estos títulos cubren las humanidades ambientales y ecocrítica de América Latina que parecieran estar ya bien enrumbadas: (1) La crítica o las responsabilidades de las artes, el cine, la literatura y el pensamiento en las ideologías o discursos detrás de los problemas socio-ambientales más generales, especialmente los ligados con injusticias y desigualdades estructurales, contemporáneos o del pasado. Y (2) el interés por el potencial o la efectiva intervención de las creaciones artísticas, en el sentido más general del término, en la conversación actual sobre grandes alternativas de futuro, las dificultades para la transición a futuros deseables y el impacto afectivo de aquella acumulación de problemas que estamos llamando el Antropoceno. Las influencias teóricas más notables son los nuevos materialismos, las ontologías políticas indígenas, la crítica al desarrollismo económico y al extractivismo en particular, la crítica decolonial de la racionalidad de la modernidad, la biopolítica y otras formas de posthumanismo, la ética del cuidado y el bienestar, y los debates sobre la definición del Antropoceno. El común denominador es la resistencia a definiciones de cultura y naturaleza a las que subyace el binarismo sujeto/objeto, el abrazar como verdaderas una variedad de ontologías sobre la interacción e interdependencia entre agentes humanos y no humanos, la redefinición de las identidades humanas, y estudiar los relatos de repetidas historias de desterritorialización.

Las "humanidades de/sobre el ambiente" no han logrado poca cosa. En su conjunto publicaciones como las listadas arriba constituyen una crítica profunda a las ideologías, discursos o narrativas (tal como se manifiestan en estos medios) dominantes sobre la interacción entre naturaleza y cultura que contribuyen, o contribuyeron, al deterioro de las condiciones socio-ambientales, y otras injusticias, en el presente y en el pasado de América Latina. Pero también son una búsqueda, en esa tradición de artes y humanidades, de ideas y valores alternativos a esas ideologías. Además, estas publicaciones en particular cumplen un papel muy importante en hacer la conversación más transversal en el campus universitario y, tal vez especialmente, en reflexionar con más lucidez sobre la sacudida que las crisis ambientales, planetarias o locales, han traído a las creencias y valores de la vida cotidiana, y a las disciplinas del conocimiento, incluida la manera cómo piensan sus "objetos" de estudio y la finalidad de sus tareas. Este campo contribuye ya a la formación de futuros profesores en las humanidades sobre perspectivas ecológicas, en el sentido más inclusivo del concepto, y por extensión de sus estudiantes que probablemente nunca se sentarán en una clase de sistemas social-ecológicos, sostenibilidad, conservación, cambio climático o el Antropoceno. El gran legado de largo plazo de nuestra educación literaria es que, para bien o para mal, constituye el corazón de nuestra formación de cómo leer e interpretar historias, o por lo menos de cómo supuestamente deberíamos hacerlo. Nuestros estudiantes encontrarán una manera de hablar más informada y sofisticada de temas que no les son desapercibidos realmente.

Desde una perspectiva histórica más larga, esta bibliografía es nada menos que el triunfo de una insurgencia contra una tradición crítica que, desde mediados del siglo XX, deliberadamente menospreció el estudio de la representación de la naturaleza o de la interacción entre humanos y no humanos en la literatura y el cine. Desde la crítica literaria del *boom* de la nueva novela latinoamericana en la década de los sesenta, pasando por las críticas de afiliación posestructural y posmodernas hasta los estudios poscoloniales estas perspectivas críticas se opusieron activamente a conversar sobre naturaleza, ecología o perspectivas no antropocéntricas. En su consecuencia más general, la ecocrítica y las humanidades ambientales son agentes que han levantado la represión de una conversación en las aulas y cafés de la ciudad letrada. Llamo la atención sobre esto

porque el lector familiarizado con la historia del cambio climático y el Antropoceno sabe que ese periodo de la historia literaria de América Latina se corresponde con la Gran Aceleración posterior a la Segunda Guerra Mundial. Esta perspectiva histórica me interesa porque nos sugiere la posibilidad de enmarcar nuestras historias de la literatura, el cine y el arte en la historia de nuestros sistemas social-ecológicos, de una manera holística e integrada, en lugar de hacerlo simplemente en la historia de procesos sociales y políticos. El concepto de "sistemas social-ecológicos" se refiere a una complejidad en la cual los sistemas sociales (económicos, políticos, culturales, tecnológicos) y los sistemas naturales (bióticos y abióticos) están interconectados y retroalimentándose constantemente a distintos niveles especialmente cuando enfrentan perturbaciones (Biggs et al. 2021). Echo de menos en nuestras "humanidades sobre/del ambiente" recurrir con más frecuencia a escalas temporales más profundas o más amplias que invitarían al estudio de archivos más vastos que el análisis de textos o exhibiciones individuales.

De hacerlo así, creo que a la bibliografía anterior no se le pasaría inadvertidas otras respuestas culturales, además de las del movimiento indígena, que también han formado parte del aprendizaje y la adaptación a las perturbaciones problemáticas traídas por el desarrollo como crecimiento económico. Una de ellas es la línea de reflexión e investigación de lo que se ha llamado la Escuela del Pensamiento Ambiental Latinoamericano, cuya figura más representativa ha sido el mexicano Enrique Leff, y cuyos orígenes se remontan a mediados de la década de los ochenta. Me parece que ocurre lo mismo con el campo de la historia ambiental latinoamericana que emergió en la década de los setenta. A ambos desencuentros se le suma la distancia con las ciencias naturales a pesar de los procesos en estas de autocrítica e innovación democratizadora.

El impacto de lecturas ecológicas de textos literarios, films y arte, ya no solo para despertar conciencias críticas con el status quo, sino para inducir a transiciones individuales y colectivas viables sigue siendo un tema de controversia. Investigaciones empíricas sugieren que esas transiciones, cuando ocurren, y para no ser fugaces, son el resultado del efecto acumulativo de muchas y sostenidas lecturas. Además, las conclusiones de los lectores pueden ser contradictorias, imprevisibles y hasta contraproducentes. Pensar el rol de las humanidades en el marco de la transdisciplinariedad es otra vía para responder esa pregunta que en distintas medidas también afecta a escritores y artistas hoy en día: ¿qué es lo que la literatura y el arte pueden hacer? Además de "dar testimonio" de nuestros tiempos, o de "imaginar alternativas" para otros tiempos, la investigación empírica de la comunicación ambiental insiste en la necesidad de modelar otras prácticas, su viabilidad, su capacidad de movilizar a otros, y que se puedan reproducir.

Las expectativas sobre la cooperación entre ciencias y humanidades en los campos ambientales no se están cumpliendo o no, por lo menos, en la magnitud que las partes involucradas aún parecen desear. A lo mejor hay que reconocer que la crítica a la ciencia y la tecnología, en las humanidades, opera como una desconfianza estructural que lleva al desconocimiento de nuevos valores y prácticas en las ciencias ambientales, sobre todo en sostenibilidad y resiliencia y ciencia posnormal, por mencionar líneas que son populares en América Latina. Por el otro lado, a pesar de que el liderazgo en las ciencias ambientales sigue argumentando a favor de la colaboración con las humanidades, por lo general éstas están involucradas como una idea tardía en los proyectos de investigación, en el mejor de los casos. Los equipos de colaboración nunca llegan a constituirse. El giro hacia las humanidades de las instituciones pareciera tener que lidiar con la desconfianza hacia los humanistas. Lo más razonable, sin embargo, es considerar que esta falta de colaboración tiene más que ver con la falta de inversión, por parte de los interesados, de atención, recursos y tiempo para la creación de los espacios y redes de cooperación necesarios.

En este momento de consolidación de las humanidades ambientales en las investigaciones ambientales y culturales de América Latina tal

vez esté ocurriendo la paradoja de que estas humanidades muestren cierta indiferencia a otras formas de pensamiento ecológico que han echado raíces en la región. El giro en la ontología política en contra del binarismo sujeto/objeto le presta atención a las ontologías indígenas de las Américas, a su rol en subvertir la política convencional de lo no humano y a su potencial como parte de procesos de decolonización en la política y en la producción de conocimiento. La resistencia al binarismo sujeto/objeto, binarismo que ciertamente es parte de las ciencias ecológicas en no poca medida, aparece como un paso sine qua non para alcanzar futuros alternativos y un obstáculo insuperable para interesarse en la colaboración con las ciencias. En estudios críticos de animales y plantas, no obstante, son "descubrimientos" de la ciencia experimental los que animan considerablemente el debate, hasta político, del status ontológico de estos seres. Estas son investigaciones en ciencias experimentales que, de hecho, surgen de la recepción positiva a los estudios críticos de la ciencia cuando ésta es poco empática, o deliberadamente distante, y desenganchada de la agencia de los "objetos" bajo estudio. Mal que bien, la transdisciplinariedad en las ciencias de la sostenibilidad y resiliencia es una respuesta indirecta a la crítica decolonial sin necesariamente entrar a conversar con ella. No son pocas las instancias, en el pensamiento de las ciencias ambientales en América Latina, que han reconocido sus propias crisis en las formas de producir conocimiento, la importancia de los no expertos y los actores sociales afectados por este conocimiento, y las dificultades en la superación del binarismo sujeto/objeto.

No se trata solo de actualizar los diálogos entre ciencia y humanidades, y hacerse justicia mutua. Se trata de concentrarse en las condiciones y posibilidades de la transdisciplinariedad. Por las características que le son propias de acuerdo con la definición propuesta más arriba, la confluencia de actores obligados a trabajar en cooperación y atendiendo a distintos intereses hace necesaria la reflexión sobre las propias formas de pensar y prácticas, y a hacerlas visibles a los demás. En el trabajo transdisciplinario es importante reconocer las diferencias de identidades y perspectivas, pero no el privilegiar la inconmensurabilidad entre distintas epistemologías y ontologías que harían imposible la comparación, la comunicación y la colaboración para la resolución de conflictos.

La apertura de la universidad emprendedora y al servicio de la industria y el comercio, a una universidad que desarrolla conocimiento con y para el público, podría cambiar las condiciones para las humanidades ambientales latinoamericanas y acentuar, pero también facilitar, una versión transdisciplinaria que todavía aparece como una tarea pendiente.

Referencias

Adamson, Joni. 2016. *Humanities for the Environment: Integrating Knowledge, Forging New Constellations of Practice in the Environmental Humanities*. Londres: Routledge.

Biggs, Reinette, Alta de Vos, Rika Preiser, Hayley Clements, Kristine Maciejewski y Maja Schlüter, eds. 2021. *The Routledge Handbook of Research Methods for Social-Ecological Systems.* Londres: Routledge.

Nye, David E., Linda Rugg, James Fleming y Robert Emmett. 2013. "The Emergence of the Environmental Humanities". Background paper, May 2013. Estocolmo: MISTRA, Swedish Foundation for Strategic Environmental Research.

Scholz, Roland W. 2020. "Transdisciplinarity: Science for and with Society in Light of the University's Roles and Functions". *Sustainability Science* 15: 1033–1049. https://doi.org/10.1007/s11625-020-00794-x. //

Agrochemical Toxicity in Latin America

by **Oscar A. Pérez** | Skidmore College | operezhe@skidmore.edu

According to data from the Food and Agriculture Organization of the United Nations, more than 863,000 tonnes of pesticides were used in Latin America in 2019 (FAO 2022). This number lumps together information on a wide variety of chemicals employed in agricultural production, including insecticides, herbicides, fungicides, bactericides, rodenticides, and plant growth regulators. A rough comparison shows an increase in the overall amount of pesticides used of approximately 23 percent compared to 2009, and 124 percent with respect to 1999. The region includes two of the five countries in the world that use the largest amount of pesticides in absolute terms: Brazil and Argentina. It also includes two of the top five countries for pesticide use per area of cropland: Ecuador and Costa Rica (FAO 2021).

Many factors drive the increasing presence of pesticides in Latin American fields, but perhaps no other single one has had a more significant effect than the exponential growth of soybean production in South America, particularly Brazil, Argentina, and Paraguay. Vast areas of forests, wetlands, and grasslands have been replaced with monocrops sustained by a myriad of agricultural technologies. From fertilizers and plant-growth hormones to pesticides, chemical products represent a considerable fraction of such technologies and have become a staple of contemporary industrial agriculture. The agrarian transformation taking place in various South American countries frequently triggers strong reactions among those who consider it a vehicle for economic prosperity and those who watch the environmental and health effects of the rapid changes with worried eyes.

Indeed, large-scale monoculture farming has generated economic wealth at the expense of ecosystems, affecting humans and nonhumans in ways we struggle to understand fully. The mesmerizing sea of green leaves that characterizes industrial soybean production overshadows its less visible aspects, whether quantifiable or not. Satellites, aerial images, and ground surveys help us track the deforestation resulting from the expansion of the so-called agricultural frontier. However, other environmental and health effects can be less evident. Beyond the destruction of habitats and lack of biodiversity of these "green deserts," the technologies used in industrial agriculture can have unintended consequences that are difficult to identify, measure, or even conceive. Agricultural chemicals pose exceptionally complicated challenges in this respect.

Practices and technologies associated with large-scale agriculture after World War II and in the context of what is commonly known as the Green Revolution have "introduced new forms of slow and invisible violence against the bodies of farmworkers and consumers due to the spread of millions of tonnes of the new agrochemicals" (Bertomeu-Sánchez 2019, 2). The assiduous use of chemicals in agricultural production is also one of the main contributors to the ecological crisis posed by the so-called persistent organic pollutants (POPs), highly toxic substances resistant to environmental degradation that can accumulate in living organisms. POPs travel long distances and are now present almost everywhere on the planet.

The use of large amounts of agrochemicals in soybean production has caused the emergence of local, national, and transnational groups and organizations centered on this issue. Their demands vary from a stricter control of the substances and more accountability for those responsible for their creation, use, and misuse to the complete overhaul of industrial agriculture

and the adoption of more sustainable practices that do not depend on these technologies. In Argentina, for example, campesino movements and Indigenous communities were among the first to raise concerns about pesticide use in soybean production. Now multiple organizations have come together under the banner of *pueblos fumigados* (fumigated towns) and regularly hold regional and national meetings. The activism of the scientist Andrés Carrasco in the 2010s also triggered a meaningful mobilization among concerned professionals in the country, like those who participate in the Red de Médicos de Pueblos Fumigados. The movement against *agrotóxicos*—as toxic agricultural chemicals are commonly referred to in Spanish and Portuguese—continues to grow and has an active presence in the public sphere. Nonetheless, it is a movement that regularly finds strong resistance among certain sectors in society. A look at the social media responses to the recent awareness-raising campaign Basta de Venenos (#BastaDeVenenos) shows how polarizing the issue continues to be.

A common argument that emerges in debates on the use of agrochemicals, particularly pesticides, is the perceived lack of conclusive evidence of their adverse effects on human health. Those who support pesticide use tend to portray pesticides as a technological marvel or, in the worst-case scenario, a necessary evil to increase food production and economic prosperity. They blame unmistakable cases of agrochemical poisoning on human errors and mismanagement. The old adage that the dose makes the poison prevails in these circles. On the opposing side, individuals point to the incongruity of creating and using highly toxic products to grow food. Many challenge the alleged lack of evidence with firsthand experiences and even with their own bodies, which act as living testimony of the health effects of these substances. Multiple issues hinder our understanding of agrochemicals' ecological and health effects. For instance, determining the toxicity of pesticides for humans and other living beings is a complex matter. There are several practical challenges in the field. A series of assumptions are made, and constraints must be defined to simplify dynamic systems and processes. Nevertheless, the intensive use of agrochemicals defies our understanding in ways that surpass the realm of the scientific and technological.

Various scholars have described the planetary ecological crisis as a crisis of representation; that is, the scales and temporalities of environmental degradation are often inconceivable to most humans. This is no small matter; after all, "pragmatic solutions seem impossible when the dimensions of crisis exceed our abilities to conceive them" (Anderson 2016, xix). Understanding the adverse effects of toxic agricultural chemicals, like other ecological crises, is closely related to issues of representation. Toxic chemicals can threaten human and nonhuman life in ways that are frequently invisible to us due to their material properties but also, and perhaps more significantly, to matters of physical scale and temporality that we humans have difficulty grasping. The slow violence perpetrated by these substances often means that many of their health effects express as progressing imperceptible changes to living bodies, changes that could easily go unnoticed in our daily lives. Furthermore, such changes could take generations to become visible. How can we make sense of the complexity of agrochemical systems and processes in ways that speak to human and nonhuman experiences? As it turns out, artists, writers, filmmakers, historians, literary and cultural critics, and others working in what we call the environmental humanities have been actively trying to answer this and other related questions. For instance, what tools do these fields offer us to understand better the scope, scales, and temporalities of agrochemical systems and processes and deal with notions often perceived as unfathomable? What responsibilities do those who create such representations have? How do representational practices and spaces influence the attention different voices receive? What is the role of representation when it comes to social and environmental justice?

The recognition of pesticides as a category for historical analysis has brought together historians of science, technology, agriculture, occupational health, and the environment, among others,

to provide a much-needed perspective on the intricate role that chemicals have had in agricultural production throughout time. Historians and other science and technology studies (STS) scholars have emphasized the sociotechnological nature of pesticides. That is, they are technologies that arise from and participate in particular social, political, and environmental contexts rather than a collection of substances that exists independently of human action. Thinking of pesticides in these terms has brought attention to lives touched by these chemicals, from scientists, policymakers, and manufacturers to activists and community members. Furthermore, in recent years, there has been a push to study the forces and mechanisms that invisibilize toxic risks and contribute to public ignorance (Guillem-Llobat and Nieto-Galan 2020). Historians have also been crucial in highlighting the differential impact toxic agrochemicals have had on communities, pointing to unequal power dynamics and environmental injustice (Bohme 2015; Porter and Rivera 2020).

Bringing visibility to the health and environmental risks of toxic agrochemicals has been a recurrent concern of artists in Latin America. Projects in the visual and performing arts have created spaces for discussions about agricultural toxicity in the public sphere while reflecting on the processes shaping our perceptions of the matter. In *El costo humano de los agrotóxicos* (*The Human Cost of Agrochemicals*), Pablo Ernesto Piovano depicts the pain and suffering of individuals whose lives and bodies have been transformed by these substances (see fig. 1). His project comprises a series of black and white photographs that form the basis of an exhibit, a video essay, and a printed book. Aware of the ethical implications of his work, Piovano strived to portray his subjects with dignity, emphasizing the connection between ethics and aesthetics (Piovano 2021). Similarly, Jordi Ruiz Cirera's series *The United Soya Republic* reflects on the connections between genetic research, industrial agriculture, and activism (Ruiz Cirera, n.d.). Making visible the negative effects of pesticides was also one of the goals of the installation *Serán ceniza, mas tendrá sentido (ligeramente tóxico)*, part of the group exhibition titled *Sin origen / Sin semilla* by Colectivo BIOS Ex machinA. For this project, members of the Colectivo grew traditional varieties of maize to later expose them to the herbicide glyphosate in a controlled experiment before audiences. The idea was to show in real time the toxic effects that the herbicide has on plants that have not been genetically modified (González Valerio 2015). The installation drew attention to the role of biotechnology in food production and the relationship between art and science. It also raised unintended questions about risk perception and showed how pesticides are hard to contain, as visitors kept touching the contaminated plants even when they were explicitly labeled as toxic, much like insects, birds, and other living and nonliving beings do in agricultural fields. Moreover, as the creators of the project were unable to reproduce the results of previous trials when the installation was shown in the context of the museum, it exposed "science to the messiness of life beyond the laboratory" and revealed the possibilities that art opens for "a different kind of knowledge" (Page 2021, 134).

Figure 1. Photograph from Pablo E. Piovano's project *El costo humano de los agrotóxicos (The Human Cost of Agrochemicals),* which examines the effects of toxic agrochemicals in rural Argentina. Reproduced with permission.

When it comes to literature, scholars have shown us how canonical works like Juan Rulfo's *Pedro Páramo* can be read as cautionary tales on the environmental effects of the Green Revolution and the technologies that supported it, pesticides among them. Moreover, they encourage us to think about how literary and discursive spaces, like the novel and the Green Revolution, can be both complementary and antithetical fictionalizing projects of the countryside (Saramago 2021, 118–121). Critics have paid close attention to the relatively recent emergence of a wave of works concerned with the environmental, health, affective, social, and individual effects of agro-industrial practices.[1] Many of these novels and short stories focus on the consequences of large-scale soybean production and the agrochemicals it requires (De Leone 2017, 65). The literature of agrotoxicity takes many different forms, from Gothic and detective novels to science fiction, and it is precisely its variety that pushes us to reflect on agrochemicals beyond an anthropocentric perspective. These works reveal how no bodies are exempt from the transformations and deterioration triggered by toxic chemicals (Heffes 2020). In doing so, they help us make sense of the human-nonhuman continuities in the natural world.

As in literature, issues related to the use of agrochemicals are present in numerous films. Although the theme has appeared in a growing number of fictional productions, filmmakers have turned to the documentary genre with more frequency to center such issues, so much so that we could now talk about an agrotoxicity subgenre.[2] The militant tradition and goals associated with Latin American activist cinema, like Tercer Cine and Cinema Novo, laid the foundation for contemporary networks of *cine comunitario ambientalista*, or environmentalist community cinema (Fernández Bouzo and Bruno Besana 2019). *Cine comunitario*—which is behind many of the agrotoxicity films—is a tool for political intervention and environmental justice. In this sense, critics have considered "how filmmaking can operate as a generative posthumanist or environmentalist practice that imagines alternative ways of sensing the world" (Fornoff and Heffes 2021, 17).

Artistic, literary, and cinematographic works allow us to follow the invisible paths of toxic agrochemicals, teaching us that such substances are material agents that spread beyond the fields where they are used, attached to the crops they help grow as well as to other living and nonliving beings. These works transport us across spaces, times, and dimensions, from the molecular changes caused by chemical reactions, to the global scale of agribusiness and its role in the climate crisis. They inspire us to reject humans and their time frames "as the measure of all things," and envision deep, unstable temporalities (Fornoff, Kim, and Wiggin 2020, xiii). Moreover, they encourage reflections on environmental responsibilities, accountability, and rights. Artists and scholars have urged us to interrogate how we engage with representations of agrochemical toxicity, in particular, and the climate crisis, in general. Their perspectives have not only complemented the work of scientists, social scientists, policymakers, and activists, but they also have made evident that environmental crises and the crisis of their representations are tied

[1] Among them are Lina Meruane, *Fruta podrida* (2007); Julián Joven (Cristian Molina), *Un pequeño mundo enfermo* (2010); Selva Almada, *El viento que arrasa* (2012); Samanta Schweblin, *Distancia de rescate* (2014); Gabriela Massuh, *Desmonte* (2015); María Inés Krimer, *Noxa* (2016); Pablo Plotkin, *Un futuro radiante* (2016); Cristian Romero, *Después de la ira* (2018); Daniel Baldi, *Los visitantes* (2019); Manuel Crespo, *Fosfato* (2019); and *Corpos secos* (2019), a collaborative project by Luisa Geisler, Marcelo Ferroni, Natalia Borges Polesso, and Samir Machado de Machado.

[2] A comprehensive list is long and includes fiction films such as *La tierra roja* (dir. Diego Martínez Vignatti, Belgium, Argentina, Brazil, 2015), *El rocío* (dir. Emiliano Grieco, Argentina, 2018), *Respira: Transgénesis* (dir. Gabriel Grieco, Argentina, 2019), and *Distancia de rescate* (dir. Claudia Llosa, Peru, Chile, Spain, United States, 2021). When it comes to documentary films we could mention many more, including *O veneno está na mesa* (dir. Silvio Tendler, Brazil, 2011), *Raising Resistance* (dir. David Bernet and Bettina Borgfeld, Germany, Switzerland, 2011), *Desierto verde* (dir. Ulises de la Orden, Argentina, 2013), *Pueblo verde* (dir. Sebastián Rodrigo Jaurs, Argentina, 2015), *Viaje a los pueblos fumigados* (dir. Fernando "Pino" Solanas, Argentina, 2018), *Andrés Carrasco: Ciencia disruptiva* (dir. Valeria Tucci, Argentina, 2019), and Colectivo Documental Semillas's web series *El agronegocio letal*, directed by Juan Pablo Lepore, which includes *La jugada del peón* (Argentina, 2015), *Dique Chico: Fumigación impune* (2018), and *Arroyo Leyes: La frutilla del postre* (2019).

to anthropocentric worldviews and paradoxical notions of modernity (e.g., Guerra Villalobos and Fazolli 2017; Polanco Rodríguez and Beilin 2019).

As Kata Beilin reminds us in the introduction to this issue of *LASA Forum*, the rise of environmental humanities in the twenty-first century acknowledges that disciplinary boundaries have limited our ability to respond to environmental crises—particularly when it comes to how we learn about, reflect on, portray, and engage with them. The environmental humanities platform has fostered multidisciplinary, interdisciplinary, and transdisciplinary work. In the case of agrochemical toxicity, such work has given us some much-needed tools to begin to understand the complexity of ecological scales and temporalities, to examine how globalized agribusiness practices are changing our world, and to reveal the links between representational, environmental, and technoscientific challenges. Scholars have pushed us to learn "from below," using our senses beyond sight, and they have made us realize that, in resisting agrochemical toxicity, human activism is entangled with weeds acquiring resistance to pesticides (Beilin and Suryanarayanan 2017). Enlightening connections between the humanities, the arts, social sciences, and natural sciences have been developed and now offer paths for future examination of the so-called Chemical Anthropocene, including chemo-ethnography, affective ecocriticism, eco-crip theory, queer ecologies, and more. Nevertheless, the environmental humanities have also made evident that more voices are needed in these debates, particularly those historically marginalized, like Indigenous activists who have been at the forefront of fights against agrochemical toxicity in Latin America. Hence, the impact of environmental humanities and the new approaches emerging from them will depend on our ability to create spaces for deeper, more inclusive conversations.

References

Anderson, Mark. 2016. "Introduction: The Dimensions of Crisis." In *Ecological Crisis and Cultural Representation in Latin America*, edited by Mark Anderson and Zélia M. Bora, ix–xxxii. Lanham, MD: Lexington Books.

Beilin, Katarzyna O., and Sainath Suryanarayanan. 2017. "The War between Amaranth and Soy: Interspecies Resistance to Transgenic Soy Agriculture in Argentina." *Environmental Humanities* 9 (2): 204–229. https://doi.org/10.1215/22011919-4215211.

Bertomeu-Sánchez, José Ramón. 2019. "Introduction. Pesticides: Past and Present." *HoST: Journal of History of Science and Technology* 13 (1): 1–27. https://doi.org/10.2478/host-2019-0001.

Bohme, Susanna Rankin. 2015. *Toxic Injustice: A Transnational History of Exposure and Struggle*. Oakland: University of California Press.

De Leone, Lucía. 2017. "Campos que matan: Espacios, tiempos y narración en *Distancia de rescate* de Samanta Schweblin." *452ºF: Revista de Teoría de la Literatura y Literatura Comparada*, no. 16: 62–76.

FAO. 2021. *Pesticides Use: Global, Regional and Country Trends, 1990–2018*. FAOSTAT Analytical Brief Series, no. 16. Rome: FAO. https://www.fao.org/3/cb3411en/cb3411en.pdf.

FAO. 2022. "FAOSTAT: Pesticides Use." *FAO.org*. http://www.fao.org/faostat/en/#data/RP (accessed February 10, 2022).

Fernández Bouzo, Soledad, and Patricio Bruno Besana. 2019. "El papel del cine comunitario en las redes de movilización ambientalistas de Argentina." *Ecología Política* 57: 86–91.

Fornoff, Carolyn, and Gisela Heffes. 2021. "Introduction: Latin American Cinema Beyond the Human." In *Pushing Past the Human in Latin American Cinema*, edited by Carolyn Fornoff and Gisela Heffes, 1–22. Albany: State University of New York Press.

Fornoff, Carolyn, Patricia Eunji Kim, and Bethany Wiggin. 2020. "Environmental Humanities across Times, Disciplines, and Research Practices." In *Timescales: Thinking across Ecological Temporalities*, edited by Bethany Wiggin, Carolyn Fornoff, and Patricia Eunji Kim, vii–xxviii. Minneapolis: University of Minnesota Press.

González Valerio, María Antonia. 2015. "Historia a destiempo que narra la creación de hibridaciones (o coordinar BIOS Ex machinA dejándose llevar por las fuerzas)." In *Sin origen / Sin semilla: Without Origin / Seedless*, coordinated by María Antonia González Valerio. Mexico City: Bonilla Artigas Editores/UNAM.

Guerra Villalobos, Jorge Ulises, and Silvio Alexandre Fazolli. 2017. *Agrotóxicos: Um enfoque multidisciplinar*. Maringá: Editora da Universidade Estadual de Maringá.

Guillem-Llobat, Ximo, and Agustí Nieto-Galan. 2020. *Tóxicos invisibles: La construcción de la ignorancia ambiental*. Barcelona: Icaria.

Heffes, Gisela. 2020. "Toxic Nature in Contemporary Argentine Narratives: Contaminated Bodies and Ecomutations." In *Ecofictions, Ecorealities, and Slow Violence in Latin America and the Latinx World*, edited by Ilka Kressner, Ana María Mutis, and Elizabeth M. Pettinaroli, 55–73. New York: Routledge.

Page, Joanna. 2021. *Decolonizing Science in Latin American Art*. London: UCL Press.

Piovano, Pablo. 2021. “El costo humano de los agrotóxicos.” *VIST*, April 9, 2021. https://vistprojects.com/el-costo-humano-de-los-agrotoxicos.

Polanco Rodríguez, Angel G., and Kata Beilin. 2019. “Toxic Bodies: Water and Women in Yucatan.” In *Environmental Cultural Studies through Time: The Luso-Hispanic World*, edited by Kata Beilin, Kathleen Connolly, and Micah McKay, *Hispanic Issues On Line,* no. 24: 168–193.

Porter, Jayson M. (guest), and Michael B. C. Rivera (host). 2020. “How Does the History of Pesticide Use Reveal Relationships between Ecological, Political and Social Violence in Mexico?” *The Arch and Anth Podcast*, no. 137. https://archandanth.com/episode-137-interview-with-jayson-maurice-porter/.

Ruiz Cirera, Jordi. n.d. “The United Soya Republic.” *Jordi Ruiz Cirera*. http://jordiruizphotography.com/work/the-united-soya-republic-ongoing/ (accessed March 4, 2022).

Saramago, Victoria. 2021. *Fictional Environments: Mimesis, Deforestation, and Development in Latin America*. Evanston, IL: Northwestern University Press. //

From Thought to Praxis: The Hydrohumanities and Hydrocriticism as Socioenvironmental Approaches in Latin American Studies

by **Ignacio López-Calvo** | University of California, Merced | ilopez-calvo@ucmerced.edu

I used to think the top environmental problems were biodiversity loss, ecosystem collapse, and climate change. But I was wrong. The top environmental problems are selfishness, greed, and apathy . . . to deal with those issues we need a spiritual and cultural transformation—and we scientists do not know how to do that.

—Gus Speth, former dean of the School of Forestry and Environmental Studies at Yale, founder of World Resources Institute, and cofounder of Natural Resources Defense Council

As I write these lines at the end of December 2021, the University of California, Berkeley's Central Sierra Snow Lab, located near Donner Pass, records the snowiest December on record: 193.7 inches, or over 16 feet, with another winter storm coming. Meanwhile, Alaska sets the record-high December temperature of 66.92 degrees Fahrenheit in an unusually warm and rainy spell. The previous year was the hottest one on record for our planet, tied with 2016. Indeed, climate change is hard to ignore nowadays.

In Latin America, where ecological activism can be a deadly business, climate change is increasingly becoming a source of social upheaval. Although water is a human right, explicitly recognized by the United Nations General Assembly on July 28, 2010, through Resolution 64/292, many people still have to give their life to have access to it. Thus, in 2019, Samir Flores, a thirty-five-year-old activist member of the Frente en Defensa de la Tierra y el Agua (Defense of Land and Water Front) was assassinated by the organized crime group Comando Tlahuica when he was leaving his residence, the day after he protested the construction, initiated in 2012, of a thermoelectric project and pipeline by the Popocatépetl volcano in the Mexican state of Morelos. The project, supported by Mexican president Andrés Manuel López Obrador, had been denounced by academics and residents because of its adverse environmental impact and its overuse of water in an agricultural area where water is urgently needed.

A 2021 report from the environmental rights organization Global Witness described Latin America as the deadliest place in the world for environmental activists. In 2020 alone, there were 165 deadly attacks on land and environmental defenders, with 65 in Colombia (where one-third of the activists were of Indigenous or African ancestry), 30 in Mexico (half of the attacks were against Indigenous communities), 20 in Brazil, and 17 in Honduras. Although most of these deadly attacks were linked to the logging industry, many were also related to water appropriation, including demonstrations against the construction of hydroelectric dams. On September 24, 2020, for example, the thirty-four-year-old Indigenous Mexican activist Óscar Eyraud Adams was murdered in his residence in Nejí, Tecate, Baja California, for fighting for the Indigenous Kumiai community's water rights, as their aquifers were being dried up by large beer and wine companies during a severe drought.

Unfortunately, the Global Witness report (2021) states, these predatory companies' attackers can act with impunity, as 95 percent of these murders in Mexico go unpunished. The report concludes that an increasing number of murders related to climate change are being committed: "We tend to associate the climate crisis with its environmental impacts—unbearable heat, air pollution, rising seas, burning forests, or super-storms. Yet the data on attacks against land and environmental defenders . . . show that the unaccountable exploitation and greed driving the climate crisis is also having an increasingly violent impact on people" (Global Witness 2021, 15). These murders of activists are just the tip of the iceberg, revealing widespread environmental injustice and the increased vulnerability of minorities and the poor to industrial pollution, natural disasters, and the effects of climate change, particularly as they relate to small-scale agriculture and ranching.

This type of violence against environmental defenders is beginning to be reflected in Hispanic cultural production, as evident in the 2010 film *También la lluvia* (*Even the Rain*, dir. Icíar Bollaín, Spain, Mexico, France). In this film within a film, a film crew that travels to Cochabamba, Bolivia, in 2000 to shoot a film about the Spanish conquest of the Americas finds itself in the middle of the Cochabamba Water War. It turns out that an Indigenous actor named Daniel (Juan Carlos Aduviri), who has a significant role in the historical film that Mexican filmmaker Sebastián (Gael García Bernal) is directing, is also leading the demonstrations against the government-supported privatization of the city's municipal water company and the increased water rates after it is sold to a powerful international corporation. Daniel is beaten up by the police during a protest and later he is almost arrested a second time, and his daughter Belén's leg is seriously injured. In the closing scenes, Daniel, grateful for the help he has received from Costa (Luis Tosar), the Spanish executive producer of the film, to save his daughter, presents him with a small container of Bolivian water as a gift. The water war in Cochabamba will reappear in the documentary film *Ríos de hombres* (Rivers of Men, dir. Tin Dirdamal, Mexico, Bolivia, 2011), where we hear about the international corporation's attempt to privatize even rainwater, about a mother who lost her son, and a general who was ordered to attack his own city, among other protagonists of the confrontation. The tragic problem with water access in Bolivia is also addressed in the interactive journalistic "webdoc" *Bolivia's Everyday Water War* (2016), financed by the Bill and Melinda Gates Foundation, which combines data journalism with documentary storytelling.

In the volume *Hydrohumanities: Water Discourse and Environmental Futures* (2021), which I coedited with Kim De Wolff and Rina Faletti, we encourage humanities scholars to take a leadership role in the urgent discussions about an anthropogenic climate change crisis that is threatening the very survival of human beings in this planet. More specifically, we claim that humanities scholars' interdisciplinary, cultural approaches to water sustainability, drought, flood, and other extreme water-related events are a valuable complement to the sciences and other nonhumanities disciplines and can lead their findings. The volume, which tries to bridge ocean-centered scholarship ("the oceanic turn" or "critical ocean studies") and research focused on rivers, works around three different themes: the agency of water ("how water, under its own power, is harnessed by and ultimately confounds human desire and control") (De Wolff and Faletti 2021, 10); fluid identities (connections between water and urban or national imagined communities); and cultural currencies (challenges to the technical and economic logics dominating public water conversations). *Hydrohumanities* emphasizes relationships between water and power, not only focusing on human power over water but also on "how water is itself powerful, not merely a substance to be fought over" (De Wolff and Faletti 2021, 6). It also calls for an activist move into praxis, emphasizing what the hydrohumanities can do to change the world: "Theoretical interventions must be carried into practices. Though concerned with alternative conceptualizations, we build on field-defining efforts to *practice* environmental humanities by addressing water problems in the world" (De Wolff and Faletti 2021, 8–9).

By exposing environmental injustice and suggesting ways to solve these problems, the hydrohumanities have the potential to contribute significantly to policymaking in relation to water. For example, addressing environmental injustice in Yucatán and, particularly, how groundwater contaminated by carcinogenic, agricultural pesticides is affecting local Mayan women's health (through cancer and toxic substances in mothers' milk and blood), Angel Polanco Rodríguez and Kata Beilin (2019, 183) argue: "the passage of toxins between bodies of water, soil, and human flesh, and the resulting illnesses and struggle for health are deeply significant processes in which culture becomes transformed by an economy in which gain is more important than health and well-being." Later, they add: "On June 5, 2018, while everybody's attention was taken by the World Cup, the Mexican government signed ten decrees that eliminated protection of three hundred water basins containing 55 percent of the available water in the country. From now on, there will be no legal obstacles for concessions to corporations needing water for their industrial ventures such as fracking, mining, soft drink and beer production, and others" (2019, 185).

This type of research lays bare the increasingly inseparable relationship between water and power in Latin America (e.g., the takeover of communal water by international corporations, often in collusion with governmental authority). It also shows the potential connection between hydrohumanities research and praxis, and between water-related concepts or ideas in the humanities and tangible actions focused on water access and environmental justice in general. If hydrohumanities research can truly contribute to rethinking the water economies that continue to destroy the environment in Latin America and to harm the livelihoods of disadvantaged groups, often Indigenous communities, then not only will societies and governments learn to appreciate the social value of the humanities but, more importantly, we may be saving lives, both human and nonhuman. This is the way in which we can, from the hydrohumanities, connect thoughts (reconceptualizing water as well as water-human relationships) to actions (fixing environmental problems, saving the planet and ourselves), thus turning some of our research into tools for resistance against environmental injustice and health hazards.

Crucial discussions about water and other environmental uncertainties in Latin America have been taking place for decades in the humanities, which also have the potential to lead scholarly research from other disciplines. The hydrohumanities—the term "blue humanities" is almost always specific to the study of oceans—turn our disciplines toward human interaction with oceanic, fluvial, and lacustrine bodies of water throughout history as a significant subfield of interdisciplinary inquiry. Taking aquatic imaginaries—both material and metaphoric—as an analytical framework, hydrocriticism (to use Laura Winkiel's term) explores the entanglement between the anthropogenetic climate crises, sociopolitical instability, and power relations inequalities in their relation to water (Winkiel 2019). These include the tense relationship between water, extractivism, and indigeneity in Latin America. Indeed, Indigenous perspectives, worldviews, and knowledge production on water and the natural world, which often adopt a decolonial outlook on imperialism and modernity, are finally being reconsidered, as they offer cultural meanings of water as something other than a commodity. Regarding water, for example, Polanco Rodríguez and Beilin (2019, 173), referencing Patricia Macías, explain: "For Yucatec Mayas, water is changing and alive, and human consciousness needs to be attuned to water. In Mayan culture, humans communicate with water and recognize that water responds emotionally." Along these lines, in the chapter I cowrote for *Hydrohumanities* (López-Calvo and López Chavolla 2021), we analyze, from the theoretical perspective of new materialism, the Peruvian José María Arguedas's novel *Los ríos profundos* (*Deep Rivers*, 1958) and the Colombian Philip Potdevin's novel *Palabrero* (2016). Potdevin re-creates the shocking real-life rise in suicide rates among the Indigenous Wayúu community in the Guajira Peninsula of Colombia, after an international mining company contaminated their water and air, dried up the Ranchería

River (*Rainkeriia* in Wayuunaiki language), and turned part of their ancestral territory into a wasteland, thus continuing the historical violence against Indigenous groups since colonial times. Ultimately, the destruction of the local land and aquatic sources becomes inseparable from the historical exploitation of Indigenous people: rivers embody Indigenous suffering and are witnesses to it. Besides the life-and-death significance of water for the Wayúu, we explore the differential relationships with water and the natural world presented in Indigenous worldviews. In Arguedas's novel, water's agency materializes in the symbolic, cultural, magical, and salvational significance of mountain rivers for Peruvian Quechua communities.

For the hydrohumanities, therefore, the trope and cultural metaphor of water becomes the analytical point of departure for the study of cultural production, as well as of sociopolitical and economic events in Latin America. Within the framework of a renewed sensibility toward spatiality, the concepts of space and place, and the connections between geography and history, the imaging of waterscapes in Latin American studies—engaging oceans, rivers, lakes, or wetlands as the axis of the analytical framework—has been gaining increased interest over the last three decades. In my own field of literary and cultural studies, hydrocriticism often addresses environmental injustice and hydraulic practices in connection with race, ethnicity, class, and gender. Echoing decolonial and postcolonial discourses, it critiques the ecocides brought about by Western modernity. The hydrohumanities encourage us to reconsider the relationship between human beings and the environment: water, and nature in general, should not be understood in terms of consumption. In this sense, following posthumanist and new materialist theories that acknowledge the agency of objects, the hydrohumanities recognize the agency of water. Human beings are decentered and presented as another element of the natural world. Interdependence is the key concept: we are one of the species in an ecosystem (Earth) and, since we are interconnected to the other living systems on the planet, we are harming ourselves by damaging them. As a blunt example, there is what Stacy Alaimo (2010) refers to as a trans-corporeal relationship between humans and the more-than-human: the toxicity that may affect fish in rivers and the ocean will also harm the human beings who eat them.

Water is no longer conceived of as an economic resource or a setting for human interaction; it is, instead, entwined with culture. It is understood that humans are all connected to water and other natural elements, which have agency and a right to share Earth with us. Thinking *with* instead of only *about* water (Blackmore and Gómez 2020), water is no longer seen as just a mere commodity to be contained, managed, and sold. Instead, for example, it may be interpreted as embodying different levels of hegemonic power or resistance, as evoking collective shared memories, or even as representing the survival of an ethnic group under siege by predatory extractive corporations (the case of the Wayúu in Potdevin's *Palabrero*).

As part of the environmental humanities, the hydrohumanities share the same ethical commitment, adopting social politics, environmental justice, and even activism, and conceiving of bodies of water as signifiers of power, resistance, historical memory, and identity. With all their associated symbolic meanings, seascapes, riverbeds, lakes, and wetlands thus become valuable hermeneutic and epistemic tools to interpret national and identitarian discourses, anti-hegemonic writing, or to critique some of the flaws of Western modernity. Within the agenda of water sustainability, the hydrohumanities also study the scarcity or absence of water in certain regions. Two decades ago, for example, Mark D. Anderson examined the sociopolitical ramifications of the cultural construction of risk through drought narratives in Northeastern Brazil in his *Disaster Writing: The Cultural Politics of Catastrophe in Latin America* (2001), a comparative study of the cultural production elicited by natural disasters in Latin America. As he explains, until the 1930s, literary tropes and symbolic abstractions were often a substitute for the use of statistics and scientific measurements in risk assessment. Anderson's chapter analyzes a long list of Brazilian drought narratives, proving that the Brazilian negative

view of the Northeastern drought as a disaster was consistently mediated by cultural production, which, in turn, influenced perceptions of cultural citizenship and politics: Euclides da Cunha's classic *Os sertões* (*Rebellion in the Backlands*, 1902), for instance, depicts the drought-stricken environment as the source of the creation of a rebellious race that cannot adapt to democracy.

The same issue of drought in Northeastern Brazil has been recently revisited in Javier Uriarte's *The Desertmakers: Travel, War, and the State in Latin America* (2020). Exploring, among other texts, Euclides da Cunha's 1901 essay "Fazedores de desertos" ("Desert Makers"), later partly incorporated into *Os sertões*, Uriarte analyzes the connection that the Brazilian author makes between drought and war (the Canudos war, in particular): drought produces starvation and hopelessness, which, in turn, lead to rebellion and war. In this way, this type of hydrocritical research invites us to rethink the relationship between the more-than-human and the human worlds, between the environmental and sociopolitical, which so often go hand in hand.

Beyond oceans, rivers, and lakes, chapter four in Axel Pérez Trujillo's *Imagining the Plains in Latin America: An Ecocritical Study* (2021) offers ecocritical analyses of canonical texts by Francisco Aquino Corrêa, Guimarães Rosa, and Manoel de Barros about the Pantanal wetlands in the southern Brazilian state of Mato Grosso do Sul (the other chapters focus on literature about the Pampas, Altiplanos, and Llanos). Another example of exciting hydrohumanities work is Elizabeth M. Pettinaroli and Ana María Mutis's coedited volume in *Hispanic Issues Online*, *Troubled Waters: Rivers in Latin American Imagination*, which focuses on knowledge production related to rivers in Latin American literature, from utopian to dystopian outlooks: "ordeals of human survival, contested symbols of identity, and complexity that beggars the power of human narrative: emblems of blighted hopes, arteries of future prosperity, and determinants of human culture" (Pettinaroli and Mutis 2013, 14). The different essays examine how writers have found in the representation of flowing waters a locus of contestation of the foundations of Latin American imaginaries, including the established symbolic value ascribed to national landscapes: connection vs. boundary; life vs. paths to death; identity vs. transformation; continuity vs. change (Pettinaroli and Mutis 2013).

Because water is so often conceived as a source of life, it should be no surprise that it is often a central element in art. Lisa Blackmore and Liliana Gómez edited the essay collection *Liquid Ecologies in Latin American and Caribbean Art* (2020), which considers the place of water, flow, liquidity, and fluidity as tropes, metaphors, and material signifiers beyond the mere concept of resource. In their own words, "*Liquid Ecologies in the Arts* confronts, from the remit of Latin America and the Caribbean, the challenges posed by cultural studies scholars in recent years that involve defamiliarizing water and moving beyond paradigms that objectify or romanticize it as a resource. The ask is not to think *about* water but *with* it. Our departure point for positing liquid ecologies as a new critical, theoretical and analytical framework for cultural production was that water is never simply water" (Blackmore and Gómez 2020, 2).

Avoiding presentism, the hydrohumanities and hydrocriticism also study the misguided environmental understandings, water economies, and ideologies of the past that have progressively led to the current hydraulic challenges of the Anthropocene. The hope is that this academic research may guide us to a more conscientious human interaction with water and the rest of the natural world, as well as to more just and sustainable aquatic futures. Socioecological justice, the environmental humanities, and the hydrohumanities (hydrocriticism) are fundamental in a region like Latin America, where economies continue to be fundamentally based on natural resource extraction. Altogether, beyond market theologies, the hydrohumanities seek to incorporate humanities scholars' research into the academic struggle for sustainability regarding water in Latin America, which other disciplinary fields had traditionally led. As the epigraph that opened this essay suggests, it

has become increasingly clear that economists and scientists cannot solve these water problems alone.

References

Alaimo, Stacy. 2010. *Bodily Natures: Science, Environment, and the Material Self.* Bloomington: Indiana University Press.

Anderson, Mark D. 2001. *Disaster Writing: The Cultural Politics of Catastrophe in Latin America*. Charlottesville: University of Virginia Press.

Blackmore, Lisa, and Liliana Gómez, eds. 2020. *Liquid Ecologies in Latin American and Caribbean Art*. New York: Routledge.

De Wolff, Kim, and Rina C. Faletti. 2021. "Introduction." In De Wolff, Faletti, and López-Calvo, *Hydrohumanities*, 1–15.

De Wolff, Kim, Rina Faletti, and Ignacio López-Calvo, eds. 2021. *Hydrohumanities: Water Discourse and Environmental Futures*. Oakland: University of California Press.

Global Witness. 2021. "Last Line of Defence: The Industries Causing the Climate Crisis and Attacks against Land and Environmental Defenders." Global Witness, September 13, 2021. https://www.globalwitness.org/en/campaigns/environmental-activists/last-line-defence/.

López-Calvo, Ignacio, and Hugo Alberto López Chavolla. 2021. "Water, Extractivism, Biopolitics, and Latin American Indigeneity in Arguedas's *Los ríos profundos* and Potdevin's Palabrero." In De Wolff, Faletti, and López-Calvo, *Hydrohumanities*, 95–117.

Pérez Trujillo, Axel. 2021. *Imagining the Plains in Latin America: An Ecocritical Study*. New York: Bloomsbury Academic.

Pettinaroli, Elizabeth M., and Ana María Mutis, eds. 2013. *Troubled Waters: Rivers in Latin American Imagination*. *Hispanic Issues Online*, no. 12. https://cla.umn.edu/hispanic-issues/online/troubled-waters-rivers-latin-american-imagination.

Polanco Rodríguez, Angel G., and Kata Beilin. 2019. "Toxic Bodies: Water and Women in Yucatan." In *Environmental Cultural Studies Through Time: The Luso-Hispanic World*, edited by Kata Beilin, Kathleen Connolly, and Micah McKay, *Hispanic Issues Online*, no. 24: 168–193.

Uriarte, Javier. 2020. *The Desertmakers: Travel, War, and the State in Latin America*. New York: Routledge.

Winkiel, Laura. 2019. "Introduction." *English Language Notes* 57 (1): 1–10. https://doi.org/10.1215/00138282-7309633. //

Alternativas vivas a la crisis climática: Defensoras de la Tierra en la COP26: Un manifiesto por la vida

por **Florina Mendoza-Jimenez, Mitzy Violeta Cortés-Guzmán, Wilma Esquivel-Pat, Rosa Marina Flores-Cruz, Wendy Monserrat López-Juárez, Tania Eulalia Martinez-Cruz, Iván Daniel Martínez-Pichardo, Erandi Medina-Huerta, María Beatriz Tzuc-Dzib, y Carlos Daniel Valdovinos-Pérez**[1]

Nuestras abuelas y abuelos nos guían, nos dan palabra y acompañan nuestro camino para hacer conciencia y pensar en nuestro pueblo. Tenemos la certeza de que nuestras visiones como pueblos originarios son las que han procurado la continuidad de la vida. Sentimos y vimos la necesidad de luchar juntas, por una justicia climática que ponga la vida en el centro. Nosotras, nosotros, somos naturaleza, lo que hacemos es curarnos con la tierra.

— Delegación Defensoras de la Tierra

El camino de llegada

En noviembre de 2021, como Delegación de Defensoras de la Tierra[2] viajamos a Glasgow, Escocia para asistir a la Conferencia de las Partes No. 26 en la Convención Marco de las Naciones Unidas sobre el Cambio Climático (COP26), con el propósito de hackear la narrativa actual de las élites ante la "crisis climática" y colocar al frente una narrativa de vida. Nuestro grupo está formado por juventudes que actúan por la interculturalidad y la justicia climática pertenecientes a Legado Gaia (LEGAIA), la División Juvenil de Cambio Climático (DJCC), las mujeres defensoras de la Red Futuros Indígenas y las territorialidades Ñuu Savi, Maya, Afrodescendiente, Nahua, K'iche', Ëyuujk, P'urhépecha, Amuzga y Zapoteca, quienes desde nuestra postura política defendemos nuestros territorios.

Este texto es el resultado colectivo de nuestros sentipensares como delegación. Reconocemos que nos une la defensa de la vida desde la diversidad de enfoques y acciones; por ello hablamos en femenino, para recuperar los sentipensares de las mujeres indígenas dentro

[1] Nota de las y los autores: Este es un trabajo colectivo, nuestros nombres se encuentran enlistados alfabéticamente reconociendo que todas las personas participamos de manera igual en la construcción de este texto y que no podemos jerarquizar nuestros sentires, pensares e identidades.

Florina Mendoza-Jiménez (autora correspondiente: ltaxavi16@gmail.com), Mixteca, doctoranda, Universidad Iberoamericana, Ciudad de México, Mexico; Mitzy Violeta Cortés-Guzmán, Mixteca, egresada de Ciencias Políticas y Administración Pública, UNAM, e Integrante de Milpa Climática y Futuros Indígenas; Wilma Esquivel-Pat, Mujer Maya, licenciada en biología, poeta, Centro Comunitario U Kúuchil K Ch'i'ibalo'on, Futuros Indígenas; Rosa Marina Flores-Cruz, afrobinnizá, Maestra en Desarrollo Rural, Asamblea de Pueblos Indígenas del Istmo en Defensa de la Tierra y el Territorio; Wendy Monserrat López-Juárez, Zapoteca serrana, investigadora independiente en Universidad de la Tierra, Oaxaca, Licenciada en Comunicación; Tania Eulalia Martinez-Cruz, Ëyuujk ja'ay, Investigadora Asociada, Universidad Libre de Bruselas, Bruselas, Bélgica; Iván Daniel Martínez-Pichardo, egresado de la licenciatura en Relaciones Internacionales, UNAM, e Integrante de Legado Gaia, Futuros Indígenas y División Juvenil de Cambio Climático; Erandi Medina-Huerta, P'urhépecha, Maestra en Geografía Humana por el Colegio de Michoacán; María Beatriz Tzuc-Dzib, mujer maya doctoranda Universidad Autónoma Metropolitana; Carlos Daniel Valdovinos-Pérez, egresado de la licenciatura en Relaciones Internacionales, UNAM, Legado Gaia, Futuros Indígenas, Fridays for Future MAPA.

[2] Futuros Indígenas, "Manifiesto Defensoras de la Tierra", 23 de noviembre de 2021, https://www.facebook.com/futurosindigenas/photos/pcb.219422140329530/219420760329668/.

de la delegación, en algunas otras secciones se expresan las voces de las juventudes participantes y en otras nuestra voz colectiva.

Reconocemos que cualquier acción climática que no integre a las comunidades originarias que cuidan la Madre Tierra y preservan el 80% de la biodiversidad global, está destinada al fracaso. En los espacios internacionales de toma de decisiones en torno a la crisis climática hay una falta de representación y escucha tanto de las juventudes como de las comunidades indígenas, a pesar de que somos quienes lideramos la lucha por el clima.

Como parte de la delegación de Defensoras de la Tierra llegamos a la COP implicadas directamente con la defensa de la vida, y eso marcó la diferencia de nuestra presencia. En este espacio, hablamos desde el dolor de nuestras pérdidas y luchas diarias, porque defender la vida de este monstruo que avanza a pasos agigantados nos ha costado violencia y criminalización, somos el blanco de gobiernos y corporaciones al señalar sus intereses. En 2020, un tercio de las personas defensoras del territorio asesinadas alrededor del mundo pertenecían a pueblos indígenas (Global Witness 2020).

Nosotras, que resistimos desde nuestros territorios el avance de la destrucción, abrazamos nuestra memoria, saberes y espiritualidad que todo este gran sistema destructor quiere eliminar. ¿Cómo no hablar de la devastación, si estando cerquita de la tierra, vivimos en carne propia la destrucción? ¿Cómo no preocuparnos si los alimentos se pierden al ser dañados los ciclos del tiempo? ¿Acaso es difícil entender que no hay alegría y dignidad en los territorios si son destruidos y con ello también la vida de las mujeres es violentada? La red de vida tiene violencias múltiples, así como nuestros cuerpos.

La crisis climática es solo un síntoma de algo que llegó hace más de 500 años a nuestros territorios con la colonización y el capitalismo. Debido a estas dinámicas, actualmente los pueblos y las juventudes vivimos en un planeta violentado que está colapsando y está siendo aniquilado por el despojo. Dentro de espacios como la COP, la crisis climática no es concebida en su complejidad: como una crisis civilizatoria que ha puesto en peligro no solamente la biodiversidad del planeta, sino la vida humana. En la COP abunda una narrativa ecomodernista y tecnocrática que busca resolver los efectos devastadores sobre la tierra y todo ser vivo desde los mismos medios que la causaron, y reproduce el discurso de "desarrollo" que ha servido a los Estados nación para el despojo de los territorios y bienes naturales.

Existe una visión del mundo impuesta, que ha jerarquizado a los países desarrollados y subdesarrollados a costa del saqueo y destrucción de nuestros territorios (Escobar 2014). Por ello, nos referiremos a los territorios y poblaciones que han sido sujetos de la dominación capitalista y colonial como Sur Global, más que como países en desarrollo (Sousa Santos, Meneses y Aquiló 2014). Asimismo, entendemos el Norte Global como aquellos países y poblaciones que se han beneficiado por el extractivismo de tales territorios para su "desarrollo" (Machado 2015, 16).

Estas dinámicas desarrollistas se relacionan directamente con el extractivismo, que impone formas utilitaristas de mirar la naturaleza y nuestro entorno en nuestros territorios, mediante megaproyectos como: el Corredor Interoceánico y sus polos industriales de "desarrollo" financiado con capital Chino, o los agronegocios de Michoacán que están devastando los territorios con monocultivos, destruyendo los bosques, acaparando el agua y contaminándola. En el centro de México, comunidades de Puebla, Morelos y Tlaxcala son afectadas por el Proyecto Integral Morelos (PIM) de inversión española, francesa e italiana, donde se encuentra la empresa Saintgobain, quien financió la COP26.

Incluso, de acuerdo al Atlas de Justicia Ambiental (2022)[3], existen conflictos socioambientales en el Sur Global, resultado de los llamados "Mecanismos de Desarrollo Limpio" presentados

[3] Atlas de Justicia Ambiental, "Global Atlas of Environmental Justice", https://ejatlas.org/ (acceso 9 de marzo de 2022).

como “soluciones climáticas”. Como ejemplo, el caso de los parques eólicos en el Istmo de Oaxaca impulsados por Iberdrola y Scottish Power (entre otras), también financiadores de la COP26. A partir de estos mecanismos, muchos gobiernos y empresas del Norte han financiado megaproyectos o comprado sumideros de carbono en el Sur, sin realmente mitigar sus emisiones (Martínez et al. 2021, 6).

Estos proyectos junto con la inacción del Estado mexicano para proteger a los pueblos, se relacionan con el asesinato de Samir Flores Soberanes en 2019, defensor del agua y la tierra. Asimismo, empresas mineras originarias de Canadá, Estados Unidos, Reino Unido, Suiza, Australia, Japón e India están devastando la tierra y envenenando nuestros ríos en todo el territorio mesoamericano, como en el municipio de El Estor en Guatemala y en el estado de Morelos en México. Todos estos proyectos se pretenden construir a costa de la voluntad de los pueblos y de la sangre de los defensores y defensoras del territorio.

Además, es claro que estas “soluciones” han sido insuficientes para limitar los efectos de la crisis climática. Tal parece que en los últimos años los Estados han puesto más esfuerzos para “proteger” la naturaleza; sin embargo, la devastación climática sigue aumentando, impulsada por quienes se benefician de la inacabable necesidad de acumulación (O’Connor 2002). El Norte Global es responsable del 92% de las emisiones históricas de Gases de Efecto Invernadero (GEI) causantes del cambio climático (Hickel 2020), así como las élites del Sur Global que justifican el extractivismo como forma de “desarrollo” (Martínez et al. 2021, 5).

En la COP26 la delegación más grande estaba conformada por empresas de combustibles fósiles, cuando está registrado que 100 de estas empresas han producido el 71% de las emisiones de GEI desde la Revolución Industrial (Climate Accountability Institute 2020). Otros responsables son los gigantes de la agroindustria que ahora contaminan incluso más que algunas grandes petroleras (GRAIN 2018) y las fuerzas armadas de países del Norte Global que han causado que la temperatura del planeta, y con ello los efectos del cambio climático, sigan aumentando (Belcher et al. 2020; Bigger y Neimark 2017).

Frente a esta realidad, las Defensoras de la Tierra entendimos que la COP no es un lugar de acción climática. Estar ahí nos dejó claro que nuestra visión nos hacía distintas de quienes miran estos espacios como el lugar de las soluciones. Asistimos con la claridad de que sus “soluciones” para “mitigar” el cambio climático, son problemas para nuestros territorios. En cambio, llegamos con el deseo de compartir con otras reexistencias del Norte y Sur Global, los retos que enfrentamos en nuestras comunidades y las alternativas vivas que creamos para protegernos, cuidarnos y sanarnos colectivamente con la tierra.

Nos organizamos de forma autónoma y nos preparamos durante varios meses en diversos temas para emprender el camino. Si bien, en un inicio se planteó como meta llegar a la COP26, en realidad esto se convirtió en un medio para encontrarnos y tejer redes. Tuvimos largas asambleas, capacitaciones con académicos, académicas y activistas, buscamos acreditaciones, creamos un fondo colectivo para solventar los gastos de la delegación e hicimos una campaña donde planteamos la urgencia de defender el futuro como un territorio frente a la crisis climática.

Al llegar, nos dimos cuenta que las COP funcionan con el tiempo del capitalismo, que avanza en línea recta y en miras al desarrollo, la principal trampa del colonialismo. Estar en el Norte Global fue desgastante. Su tiempo constriñe, asfixia, controla. Lo mismo pasó con nuestras voces al interior de las negociaciones, fueron ignoradas. El tiempo que han construido lo usan como su mayor aliado, donde la emergencia debe atenderse con soluciones rápidas basadas en el dinero, a costa de la invasión de nuestros pueblos y ecosistemas. Para los dueños del tiempo se puede comprar el futuro. Sus acuerdos estaban plagados de planes de cero neto, en los que se planea “compensar” en el futuro las emisiones producidas por el estilo de vida de pocos en el presente.

Nuestra concepción del tiempo es distinta, el tiempo renueva, es paciente, hace espiral, donde la vida es también contingencia. Toma tiempo ponernos de acuerdo y organizarnos, porque escuchamos y respetamos la palabra, los sentires, los ciclos espacio-temporales y la guía de nuestros ancestros. La recurrente anulación de nuestra palabra nos hizo saber que no quieren integrarnos a las negociaciones. El reclamo por mantenernos en la norma de su tiempo fue revelador. Fuimos una contingencia en un mundo en el que el control ha sido la clave para dominar las vidas, para moldearlas y para mantenerlas en un solo curso: el del progreso moderno occidental.

En varias ocasiones experimentamos la lógica unidireccional del Norte Global: en las restricciones de entrada a los espacios de incidencia, en la delimitación de espacios "exclusivos" para pueblos originarios y juventudes y, en todo momento, el inglés como idioma universal que se convirtió en una frontera. Entendimos algo: nuestras vidas se vuelven o una forma de legitimación política y tokenismo, o un estorbo. Los pueblos indígenas y las juventudes somos vistos de manera pasiva, como receptores de políticas y acuerdos entre los Estados nación y las corporaciones, pero no quieren ver que en realidad *somos la alternativa viva a la crisis climática.*

Confirmamos que para nuestras comunidades ancestrales, esos espacios no son fructíferos, sentimos los atropellos en nuestros cuerpos. Llegamos con la voz de nuestras comunidades que están siendo afectadas por el extractivismo y nos encontramos con un espacio desesperanzador, un espectáculo en el que el absurdo es la norma. En las COP muchas personas aplauden las "soluciones" que despojan nuestros territorios, legitiman las decisiones de las corporaciones y gobiernos que han causado la crisis, y ven como "éxito" las negociaciones que nos llevarán a un planeta de 2.4°C (Climate Action Tracker 2021).

Sin embargo, a pesar de todo, sentimos que es importante seguir tomando estos espacios para denunciar las injusticias ambientales. Estos lugares necesitan ser sanados, ser más diversos, abiertos al diálogo y a la interculturalidad. No debemos olvidar que no es posible crear protocolos que detengan los efectos del cambio climático, sino se incorporan y atienden las demandas de las comunidades que ya lo están viviendo. Estamos convencidas que es necesario plasmar la escala de los efectos que el cambio climático tiene en nuestras comunidades porque, para quienes vivimos en el Sur Global, la crisis climática no es algo del futuro, es algo del presente. El cambio climático está impactando directamente a nuestros cuerpos y está poniendo en peligro la continuidad de muchas culturas en el mundo que son los reservorios del cuidado de la tierra y la vida en medio de la crisis.

Para construir los futuros que queremos habitar, las respuestas a la crisis climática están en los territorios ancestrales, debemos establecer diálogos interculturales y tejer conexiones con movimientos y comunidades que pongan la vida en el centro. A pesar de las vicisitudes, fue valioso conocer las dinámicas y los discursos en espacios alternativos, ahí, nos encontramos con personas y grupos que resisten y cuidan la vida de distintas formas. Tejimos con sus dolores y sus luchas para sembrar esperanza. Nos curamos estableciendo relaciones recíprocas en un diálogo de saberes dirigido hacia un mismo fin: detener la crisis climática y todos los sistemas de opresión que nos atraviesan.

En nuestras pieles floreció la historia de desigualdades que cargamos desde nuestros territorios, el daño a nuestros pueblos, re-vivimos injusticias que no sabíamos que llevábamos cargando en nuestros cuerpos. Habitar aquellas tierras tan heridas también nos hizo reconciliarnos, para sanar a nuestras comunidades y a ese territorio tan lastimado. Nos unimos a las organizaciones de esas tierras, con los sentires compartidos, con el dolor del bosque y con la opresión de las minorías que están ahí: resistiendo. Estar en ese lugar con memoria antigua nos hizo ir y abrazarla, reconocer sus espíritus y energías que persisten y existen, aún, en medio de tanta destrucción.

Nuestros cuerpos generaron disrupción, señalaron la urgencia de mirar de frente a los poderosos, de gritar: ¡ya basta de explotar la tierra!, porque ponen en peligro nuestra existencia como pueblos y la vida que nos rodea. Quienes se han alejado de la tierra han perdido el horizonte, han olvidado su palpitar, necesitan retornar a ella para mirar lo imprescindible de la vida y los elementos que la componen, es ahí donde comienza el cambio, en el reconocimiento de nuestro ser y estar en este mundo. Estamos entretejidos y entretejidas, tenemos una casa común: la tierra, nuestras vidas también son dignas.

Los estilos de vida actuales no pueden seguir manteniéndose a costa de la explotación en nuestros territorios. Cada ciudad y comunidad concreta debe encontrar sus maneras propias y autónomas de construir, sin colonizar y explotar otros territorios, dejando de vivir a costa del sufrimiento de nuestras tierras.

Hicimos florecer nuestra voz en medio del pálido invierno para hackear las narrativas de los espacios cooptados por discursos extractivistas, formulados por corporaciones internacionales en alianza con Estados nación. Nos mueven las ganas de continuar construyendo desde lo concreto, desde nuestros territorios, para seguir defendiendo la vida, caminando junto con otras, con la certeza de que no estamos solas y es necesario tejer con distintos lugares del mundo para seguir sembrando y cultivando. Sabemos que la esperanza está en los territorios plurales, en la sabiduría ancestral que vive en nuestra gente, que es guía de acción para el futuro.

Referencias

Belcher, O., P. Bigger, B. Neimark, and C. Kennelly. 2020. "Hidden Carbon Costs of the "Everywhere War": Logistics, Geopolitical Ecology, and the Carbon Boot-Print of the US Military". *Transactions of the Institute of British Geographers* 45 (1): 65–80.

Bigger P., y B. Neimark. 2017. "Weaponizing Nature: The Geopolitical Ecology of the US Navy's Bioful Program". *Political Geography* 60: 13–22.

Climate Accountability Institute. 2020. "Update of Carbon Majors 1965–2018". Press release, 9 December 2020.

Climate Action Tracker. 2021. "The CAT Thermometer". Update 9 November 2021. https://climateactiontracker.org/global/cat-thermometer/.

Escobar, Arturo. 2014. *La invención del desarrollo*. Popayán, Colombia: Editorial Universidad del Cauca.

Global Witness. 2020. "Las industrias responsables de la crisis climática y los ataques contra las personas defensoras". Global Witness, septiembre 2021. https://www.globalwitness.org/es/last-line-defence-es/.

GRAIN. 2018. "Big Meat and Dairy Companies Are Heating Up the Planet". Grain.org, 18 de julio de 2018. https://grain.org/es/article/5999-big-meat-and-dairy-companies-are-heating-up-the-planet.

Hickel, Jason. 2020. "Quantifying National Responsibility for Climate Breakdown: An Equality-Based Attribution Approach for Carbon Dioxide Emissions in Excess of the Planetary Boundary". *The Lancet: Planetary Health* 4 (9): e399–e404.

Machado Aráoz, Horacio. 2015. "Ecología política de los regímenes extractivistas: De reconfiguraciones imperiales y re-existencias decoloniales en nuestra América". *Bajo el Volcán* 15 (23): 11–51.

Martínez, I., M. Cortés, T. Zega, I. Ávila, C. Valdovinos, S. Acosta, L. Samaniego, P. Sifuentes y I. Balderas. 2021. "Justicia climática desde ABYA YALA: poniendo la vida en el centro. No necesitamos cero neto, necesitamos cero extractivismo". https://drive.google.com/file/d/1HJyMp5PRHFY1xAnR6wWaT_SRlWkdmoBk/view.

O'Connor, James. 2002. "¿Es posible un capitalismo sostenible?" En *Ecología política: Naturaleza, sociedad y utopía*, ed. Héctor Alimonda, 27–52. Buenos Aires: CLACSO.

Sousa Santos, Boaventura de, María Paula Meneses y Antonio Aguiló. 2014. *Epistemologías del sur: Perspectivas*. Madrid: Ediciones Akal. //

Henry M. Silvert, PhD, Champion for Social Justice

from **Morrie Sherry Silvert**

Henry M. Silvert, lifelong champion of human rights worldwide, finally defied the exclamation of his childhood doctor—"This boy doesn't know how to die!"—uttered after young Henry sailed off a cliff in Mexico in 1955 at age six, along with a secretly suicidal graduate student at the wheel. He wound up in a two-and-a-half-months-long coma. The driver died that night. Most feared Henry would never wake up. But wake up he did. And then young Henry had to fight through pain and fog to relearn everything he'd known, from how to speak to how to walk.

The young Silvert had lots of encouragement from his politically active parents, eminent Latin Americanist and political scientist Kalman H. Silvert, and sociologist and author Frieda M. Silvert, who continued to host dinner parties in New York for Latin American political dignitaries after her husband's death. Neither determined parent would brook any excuse. Nor would the hospital staff. Whenever Henry yelled "I don't want to do that," they all persisted until he agreed. And so young Henry began what was to be a basic part of his life, walking resolutely despite a perpetual limp, speaking clearly, and fighting for freedom.

Henry had always been a precocious child who played the violin and bridge, along with hide and seek. And he'd been trained early on the values of liberty. At the age of three, against his parents' demurrals at a dinner party when a guest had insisted he sing a song, young Henry jumped on a chair and belted out "La Marseillaise," theme of the French Revolution his mother had sung with him whenever they were in the kitchen together tidying up after meals his father or various cooks put together with far more skill; his mother was notoriously lacking in that particular talent, according to Henry.

On December 10, 2021, after a long battle with adenoid cystic carcinoma, the younger Silvert finally succumbed. He was 73. But his life-affirming, joyous spirit lives on as a model of a life fully lived, even while overcoming drastic circumstances, in the memoir he did see published recently: *An Indelible Event and Detour Through a Global Childhood*, which won the IRWIN Award for Best Nonfiction Book of 2021 (Book Publicists of Southern California's Industry Recognition of Writers in the News award). As D. Donovan, senior reviewer, Midwest Book Review, writes, "A life-threatening car accident may have changed his trajectory, but it didn't defeat his attitude. Silvert grew into a political activist, employing a social inspection that embraced both his South American experiences and childhood and a growing optimism undaunted by the rigors of adversity."

As a survey associate and statistician, Dr. Henry M. Silvert worked at The Conference Board for 23 years until his retirement, and coauthored numerous reports regarding business matters. He also worked on projects addressing, among other topics, childhood hunger, drug use, and the HIV/AIDS epidemic. He gave presentations at conferences on Chile's return to democratic practices. As a visiting professor at the Colegio de Mexico, he taught comparative politics of Latin America, and taught various sociology courses as an adjunct professor in New York City as well. He was a member of the Latin American Studies Association (LASA) and the American Sociological Association (ASA). Aside from his professional work in the field, Silvert never missed

an opportunity to speak with people from all backgrounds, and ages, about social issues of the day. He'd always impart wisdom infused with humor, not infrequently capping the moment with a sing-along of songs of social justice.

Prior to his professional accomplishments, Hank, as he was known to family and friends, was no stranger to controversy. In succeeding years in their new homes in New York City, where his father taught at NYU, and earlier in New Hampshire, while his father taught at Dartmouth College, Hank engaged in civil disobedience a number of times. One memorable moment came when then Governor Wallace came to Dartmouth to speak. Infuriated by the very idea that an avowed segregationist was running on a platform of "Segregation now, segregation tomorrow, segregation forever," Hank, with a select group of protesters he and his family had joined, showed up wearing a white sheet with red letters reading, "Would you let Wallace marry your sister?" Law enforcement authorities asked, then ordered Hank to take off the sheet. He continually refused escalating levels of representatives of the law, quoting, quite articulately, the laws protecting the protesters' rights to demonstrate. Informed he must obey or be "thrown out" by an Alabama state trooper, Hank replied, "You are an Alabama cop and you have no jurisdiction in New Hampshire, so get away from me and leave me alone." A New Hampshire state trooper came over and told him he had to leave. Hank continued to explain why he did not have to comply to the series of state and local police trying to eject him. Finally, two cops prepared to escort him out of the room. Hank refused to walk out, sat down, went limp and was carried out. In his sheet. The speech was to be broadcast outside the auditorium. Hank could hear the announcer saying Wallace stopped speaking and left the podium.

Of returning relevance today, Hank spoke up at a draft board during the time of Vietnam. As he wrote in his book, he had no expectation he would pass, but "wouldn't miss the opportunity to report for the physical if you paid me." Living in Manhattan at the time, he was still legally registered as a resident of Vermont, so he drove up to report in at Woodstock, expecting to see what "I had only heard about [the Vietnam War] from Arlo Guthrie's album, *Alice's Restaurant*." Looking over the application, once he and others were moved to the Army Induction Center in Manchester, New Hampshire, he asked the officer behind the desk to clarify a few organizations draftees needed to state they did not belong to, intended to weed out "undesirables." "I notice that the Ku Klux Klan of New Jersey is on the list, but the Ku Klux Klan of Alabama is not. Could you tell me why it is not listed?" The officer had no idea. Nor did he know why one Socialist organization was listed but not others. Hank concluded by announcing he could not sign papers he did not fully understand. He then stood up and sang Phil Ochs's "The Draft Dodger Rag." Every verse.

Silvert did his undergraduate and doctoral studies at New York University, earning his PhD in Sociology in 1986, and read for a Bachelor of Philosophy Degree in Latin American area studies at the University of Oxford. Born in Philadelphia in 1948, he spent his childhood years in New Orleans, Guatemala City, Mexico City, and Buenos Aires and lived in Hanover, New Hampshire, and Norwich, Vermont as a teenager, and finally New York City, where he spent most of his adult years until his recent passing.

Silvert is survived by his wife of forty years, Morrie Sherry; brother Benjamin and his wife, Andrea Weinstein; brother Alexander and his wife, Diana Warrington; niece Lea and nephews Che and Eli Silvert. He is predeceased by his nephew Kal. A celebration of Silvert's life will be held in the spring 2022.

Note: If you would like to make a charitable donation in memory of Henry M. Silvert, please go to the Abraham Lincoln Brigade Archives website https://alba-valb.org/giving-season-2021/ and direct it to ALBA's Teaching Institutes.

An Indelible Event and Detour Through a Global Childhood: A Memoir is available from Amazon.com: https://www.amazon.com/Indelible-Detour-Through-Global-Childhood-ebook/dp/B093J8V6DN/ //

CONVOCATORIA ABIERTA PARA LA PUBLICACIÓN DE LIBROS ACADÉMICOS

Latin America Research Commons (LARC) es una iniciativa de la Asociación de Estudios Latinoamericanos (LASA, por sus siglas en inglés) y la primera editorial de acceso abierto dedicada íntegramente a los Estudios Latinoamericanos.

El objetivo es publicar trabajos inéditos en español y portugués que sigan normas de rigor académico.

Se privilegiarán aquellas propuestas que sostengan una visión interdisciplinaria de las Ciencias Sociales y las Humanidades y tengan en cuenta a América Latina en su conjunto.

Los libros se publicarán en formato digital en nuestro sitio, con el fin de contribuir a una difusión más amplia del conocimiento.

LASA | LATIN AMERICA RESEARCH COMMONS

Complete su solicitud en www.larcommons.net ■ Consultas: larc@lasaweb.org

EDITAL ABERTO PARA PUBLICAÇÃO DE LIVROS ACADÊMICOS

A Latin America Research Commons (LARC) é uma iniciativa da Associação de Estudos Latino-Americanos (LASA, segundo a sigla em inglês) e a primeira editora de livre acesso dedicada integralmente aos estudos latino-americanos.

O objetivo é publicar trabalhos inéditos em espanhol e português que sigam padrões de rigor acadêmico.

Serão priorizadas propostas que tenham uma visão interdisciplinar das Ciências Sociais e das Humanidades e que levem em conta a América Latina como um todo.

Os livros serão publicados em formato digital em nosso site, com a finalidade de contribuir com uma divulgação mais ampla do conhecimento.

LASA | LATIN AMERICA RESEARCH COMMONS

Preencha sua solicitação através de www.larcommons.net ■ Consultas: larc@lasaweb.org

LATIN
AMERICAN
STUDIES
ASSOCIATION

The Latin American Studies Association (LASA) is the largest professional association in the world for individuals and institutions engaged in the study of Latin America. With over 13,000 members, over 60 percent of whom reside outside the United States, LASA is the one association that brings together experts on Latin America from all disciplines and diverse occupational endeavors, across the globe.

www.lasaweb.org