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Speaking Power to “Post-Truth”: Critical Political Ecology and the New Authoritarianism

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Given a history in political ecology of challenging hegemonic “scientific” narratives concerning environmental problems, the current political moment presents a potent conundrum: how to (continue to) critically engage with narratives of environmental change while confronting the “populist” promotion of “alternative facts.” We ask how political ecologists might situate themselves vis-à-vis the presently growing power of contemporary authoritarian forms, highlighting how the latter operates through sociopolitical domains and beyond-human natures. We argue for a clear and conscious strategy of speaking power to post-truth, to enable two things. The first is to come to terms with an internal paradox of addressing those seeking to obfuscate or deny environmental degradation and social injustice, while retaining political ecology’s own historical critique of the privileged role of Western science and expert knowledge in determining dominant forms of environmental governance. This involves understanding post-truth, and its twin pillars of alternative facts and fake news, as operating politically by those regimes looking to shore up power, rather than as embodying a coherent mode of ontological reasoning regarding the nature of reality. Second, we differentiate post-truth from analyses affirming diversity in both knowledge and reality (i.e., epistemology and ontology, respectively) regarding the drivers of environmental change. This enables a critical confrontation of contemporary authoritarianism and still allows for a relevant and accessible political ecology that engages with marginalized populations likely to suffer most from the proliferation of post-truth politics. *Key Words:* authoritarianism, environmental policy, political ecology, post-truth, science.

有鉴于政治生态学挑战环境问题的霸权“科学”叙事之历史，当前的政治时刻面临了强大的难题：如何（持续）批判性地涉入环境变迁叙事，同时面对“民粹主义”所提倡的“另类事实”。我们质问政治生态学者如何能够置身于今日威权主义形式增长中的力量，并强调该力量如何通过社会政治领域和超越人类的自然进行运作。我们主张对后事实的话语权需要有清晰且有意识的策略，以促成以下两件事：首先是接受应对企图模糊或否认环境恶化与社会不公者时的内部矛盾，同时保留政治生态学者在面对自身对于西方科学与专家知识决定环境治理的主流形式上所拥有的优势角色时的历史性批判。此一涉及对后事实及其孪生的另类事实与假新闻之理解，它们是由企图巩固权力的政体所进行的政治运作，而非体出对现实本质的一致本体论理模式。再者，我们区辨后事实与断言环境变迁的导因体现知识与现实的多样性之分析（例如分别就认识论与本体论而言）。这么做，使得对当代威权主义的批判性对抗成为可能，同时考量有意义且具可及性的政治生态学，该学问涉入可能因后事实政治的盛行而受害最深的边缘人口。关键词：威权主义，环境政策，政治生态学，后事实，科学。

Dada una historia en ecología política que reta las narrativas hegemónicas “científicas” en lo que concierne a los problemas ambientales, el momento político actual pone de presente un enigma portentoso: cómo (seguir) involucrándose críticamente con narrativas del cambio ambiental al tiempo que se confronta la promoción “populista” de “los hechos alternativos”. Nos preguntamos cómo podrían situarse los ecólogos políticos en relación con el creciente poder que registran las formas autoritarias contemporáneas, destacando

el modo como opera el segundo a través de los dominios sociopolíticos y las naturalezas que están más allá de lo humano. Inquirimos por una estrategia clara y consciente del poder de la palabra ante la pos-verdad, para habilitar dos cosas. La primera es llegar a un acuerdo con una paradoja interna de hablarle a quienes buscan ofuscar o negar la degradación ambiental y la injusticia social, en tanto se retiene la propia historia crítica de la ecología política sobre el papel privilegiado de la ciencia occidental y el conocimiento experto para determinar las formas dominantes de la gobernanza ambiental. Esto implica entender la pos-verdad y sus pilares gemelos de hechos alternativos y noticias falsas, como si estuviesen siendo operados políticamente por aquellos regímenes que buscan respaldar el poder más que personificar un modo coherente de razonamiento ontológico en relación con la naturaleza de la realidad. Segundo, diferenciamos la pos-verdad de los análisis que afirman la diversidad tanto en conocimiento como en la realidad (i.e., epistemología y ontología, respectivamente) en relación con los controladores del cambio ambiental. Esto permite una confrontación crítica del autoritarismo contemporáneo y deja campo todavía para una ecología política relevante y accesible que se comprometa con las poblaciones marginales, más propensas a sufrir los efectos de la proliferación de políticas pos-verdad. *Palabras clave: autoritarismo, ciencia, ecología política, política ambiental, pos-verdad.*

Post-truth is the latest manifestation of a long, troubled history in the relation between truth, politics, and power. Indeed, it is hardly a revelation that politicians selectively choose (or construct) their facts to serve particular ends. Yet, the current political moment has also managed to provoke a heightened level of anxiety about the nature of truth in science and politics that has emerged as particularly disruptive (Dillon et al. 2019). This anxiety has ushered in new language with terms such as *alternative facts* and *fake news* becoming part of an everyday vocabulary.¹ For geographers, and in particular political ecologists, post-truth presents a familiar yet intensified challenge. Post-truth provokes questions for scholars critical of scientific institutions and their knowledge-making practices that shape environmental policy, given that these same institutions are now under attack from populist authoritarian discourse and policies.

A paradox thereby emerges between working with, while also problematizing, the production of knowledge associated with positivist science—a paradox that demands both reflection and action from critical political ecologists and activists alike (Robbins 2015). How can political ecologists mount an effective challenge against the propagation of alternative facts in service of populist authoritarian agendas, while also embracing multiple knowledges and realities associated with cultural and linguistic diversity (de la Cadena 2010; Burman 2017)? How can we defend this stance against charges that our dismay with post-truth politics stems from an elite, liberal “chagrin at the fact that the wrong kinds of people are suddenly claiming authority and having their say?” (Mair 2017,

3). Finally, how can political ecologists, many of whom have long insisted on the need to analyze the politics of knowledge production within science, work with science to show that the form of critical engagement we advocate and practice is different from that propounded by the authoritarian right?

Both political ecology and post-truth politics take issue with certain hegemonic types of truth making.² It is political ecology, however, that concerns itself with the epistemological violence effected through the coloniality of reality that subjugates cultural, and especially indigenous, diversity in relation to ecological knowledges and praxis (Burman 2017; Sullivan 2017). Our main contribution in response to this is to affirm the necessity of speaking power to post-truth (Collingridge and Reeve 1986): by amplifying an inclusive, effective, and publicly accessible political ecology that both refracts populist (re)framings of socioenvironmental concerns—at times mobilizing and allying with positivist science to do so (King 2010; Brannstrom and Vadjunec 2013)—and organizes to contest mechanisms of authoritarian power.

This strategy, first, situates political ecology as a useful bridge to a diversity of approaches that probe the co-constitutive relationship between environmental politics and scientific truth making (Jasanoff 2006). It recognizes and welcomes the conceptual convergence between, for example, political ecology, science and technology studies (STS), and anthropology (Rocheleau 2008; Goldman, Nadasdy, and Turner 2011; Dillon et al. 2019). Combining perspectives across these approaches means accepting that knowledges do not necessarily become authoritative because they more accurately portray “the truth.” Rather, they

become paradigmatic as the truth in part through their generation and endorsement in politically empowered networks as the best means of uncovering the truth (cf. Kuhn 1970; Foucault 1980; Guthman and Mansfield 2013). Foregrounding (once again) these relationships between political power and truth claims makes it possible to clarify mechanisms of knowledge production and exclusion and thereby to clarify possibilities for contestation (Hulme 2010).

Second, as well as having an established history of critically analyzing environmental truth making, political ecologists are experienced and motivated in acting and collaborating beyond the academy, to speak power to post-truth through new knowledge coalitions and action. Coalitions beyond the academy are about creating an accessible political ecology that can empower a politically engaged and informed resistance to current post-truth narratives. We argue that political ecology and cognate disciplines can combine with reflexive scientific knowledge production to offer collective responses within this eco-political moment. This sort of critical political ecology (Forsyth 2003) contributes to broader public discourse and builds on recent attempts to decolonize knowledge production inside and outside the academy not by creating a geographic and academic silo, but rather to be united against a reductive and regressive post-truth debate.³

In what follows, we provide a brief genealogy of political ecology in relation to post-truth. We proceed by offering three interrelated areas for intervention that, taken together, may articulate a political ecology counternarrative to truth making while remaining critical of authoritarian attacks on knowledge production. We insist throughout that it is possible to retain our critical stance toward scientific knowledge production through careful positioning of it within the circuits of its own production. When this same critical approach is applied to alternative facts, we can show that these are not new ways of knowing but rather new mechanisms of deploying power within an erstwhile and reductive ontology that colonizes other ways of knowing.

Political Ecology beyond Post-truth

Political ecology has long been concerned with authoritarian forms of power and politics in relation to environmental knowledges, policies, and infrastructures, as well as to understandings of the

materiality of nature itself.⁴ At its core, early political ecology analyzed historically and spatially situated (and differentiated) powers to access and control natural resources, originally seen through class and later through other forms of social difference such as gender, ethnicity, age, and, sexuality. Political ecology thereby brought into focus how “the environment is an arena of contested entitlements, a theatre of which conflicts or claims over property, assets, labor, and politics of recognition play themselves out” (Peluso and Watts 2001, 25; Rocheleau, Thomas-Slayter, and Wangari 1996). A second related dimension of political ecology soon emerged that involved a more poststructuralist understanding of the politics of environmental knowledge production and its material-discursive interplay with environmental governance (Escobar 1995; Peet and Watts 1996; Stott and Sullivan 2000). Reflecting the influence of Foucault, a key emphasis has been on the institutional and other societal structures through which environments and environmental truths are defined, known, and therefore controlled and managed (Peet and Watts 1996; Robertson 2006; Burke and Heynen 2014).

A series of early empirical studies showed how local ecological problems have origins in trans-scalar political and economic contexts, rather than merely the allegedly maladaptive behaviors of local land users (Watts 1983; Blaikie and Brookfield 1987). Environmental processes were presented by apolitical (and Malthusian) ecological analyses as caused by small-scale producers, while research in political ecology demonstrated how these problems were incorrectly explained, or largely exaggerated, thereby challenging received wisdom on environmental degradation (Fairhead and Leach 1996). An outcome of these local(ized) studies was that there were different ways of knowing and managing environments which were frequently bypassed by mainstream environmental policies. For Forsyth (2003; see also Benjaminsen, Aune, and Sidibé 2010), this also meant linking political economy and epistemologies of environmental change to empirically challenge dominating environmental policies.

Although certainly critical, such challenges to dominant narratives and theories are—as the explicitly antiauthoritarian *The Open Society and its Enemies* (Popper 1971) observed—simply an integral feature of good (social) scientific inquiry. A certain degree of skepticism toward knowledge claims and

findings is part of conventional scientific practice. As such, political ecology's relationship to environmental science has over the years been complex. Playing the "trickster," political ecology both engages and borrows methodology from mainstream science regarding land use change, hazards, and environmental health, only "to undermine them, demonstrating power-laden implications in any such foundational account of human/environmental relationships" (Robbins 2015, 93).

Recently, political ecology has been shaped more explicitly by postcolonial, subaltern, feminist, and queer critiques, opening up new avenues to counter "universalizing dimensions" of knowledge production associated with Western science and modernity (e.g., Nightingale 2006; Burman 2017; Sullivan 2017). Political ecologists have also found fertile ground in debates emanating from assemblage theorists in actor network theory (ANT) within STS, emphasizing how environmental phenomena and governance are mediated by technology and materiality (Bennett 2010) and the roles of beyond-human actants in socio-techno-natural assemblages (Castree and Braun 2001; Kosek 2006; Goldman, Nadasdy, and Turner 2011).⁵

Equipped with these new epistemological and ontological tools, political ecology has the ability both to distinguish itself vis-à-vis power, especially in its contemporary authoritarian forms and to push similar work to explore how forms of power operate through sociopolitical domains and nonhuman natures. Therefore, in echoing contemporary calls to scrutinize alternative facts, political ecology's attention to power-laden scientific claims is well equipped to examine differing environmental representations to expose the multiple ways in which power operates to produce, maintain, and privilege particular "truths" about the environment.

The openness and fluidity of poststructuralist approaches to knowledge production, however, lend themselves both to a seeming "overcomplexification" of socioecological circumstances and to cooptation by far right agendas. The latter have knowingly borrowed tactics and strategies used by left-leaning activists and scholars to highlight the politics of knowledge production, to push for the acceptance of alternative facts and to relativize the views of scientists and right-wing ideologues (Nagel 2017). Thus, the awkward conceptual resemblance between alternative facts and academic debates about the politics of knowledge production is not mere coincidence.

Yet, there are crucial distinctions to be drawn between critical approaches of scientific practice and the tactics now adopted by the alt-right. A critical approach to the environmental sciences underscores the ways in which power constitutes, moves within, and reproduces sociomaterial relations to shape which knowledges, social relations, and practices (and corresponding ecologies) are hegemonic. For example, although not always accomplished, many political ecologists attempt to challenge dominant environmental narratives and recognize multiple non-Western knowledge perspectives to analyze the production of uneven environmental outcomes for diverse individuals and populations (Burman 2017). Such groups and individuals are stratified by differences and inequalities of—*inter alia*—class, ethnicity, and gender and are commonly those most vulnerable to socioecological shocks or stressors. Difference and inequality in turn shapes and are shaped by environmental change processes themselves (Nightingale 2006). Moreover, by observing everyday and mundane forms of authoritarian power and governmental control, critical political ecologists have sought to take account of how knowledge and governance of resources are actively resisted and have been a focal point for empowerment of marginalized groups through both individual and collective agency (Li 2007; Wolford 2010).

Future political engagement by political ecologists and others therefore requires a sharpened focus on knowledge production and who holds the power to define truth (Gramsci 1971; Foucault 1980).⁶ This ontological politics probes the values, relations, and practices through which some forms of knowledge (epistemologies) come to be accepted as more true than others. One way forward could be to carefully distinguish between the ontological and epistemological politics of asserting that there are many ways of knowing, measuring, and relating to or being in "different" worlds (ontology). If we accept the notion of multiple ontologies (that what the world is can be different across communities of knowing), political ecologists have much to say about the socio-material relations through which different ontologies arise and are sustained. There is an accompanying epistemological politics of asserting the truth about how one ostensibly should know or live in a single world. This latter stance largely rejects the notion of multiple ontologies and rather probe how asserting a single epistemology (how we can know the world) is inextricably bound up in claims to authority.

One role for political ecologists is to illuminate how the privileging of alternative facts exacerbates tensions between different ontologies and thereby claims space for competing knowledge claims. Some take the position that feminist political ecologists' engagement with power and privileged forms of environmental knowledge construction could help guide us to navigate the paradox of post-truth politics, while some others prefer seeing power through the lens of structuralism and/or post-structuralism. Nevertheless, we thereby advocate that political ecology, in all its forms, be made more relevant, accessible, and engaging to (newly) marginalized populations while we work to bridge the binary of science and activism closely with social movements toward new “liberation ecologies” (Peet and Watts 1996) and alternative sustainabilities (Cavanagh and Benjaminsen 2017).

Speaking Power to Post-truth

A constructive and critical political ecology, then, is about meeting power with power, mobilizing not only the discourses and social networks of critical scholarship, which at times can be just as universalizing in their own right, but also publicly informed elements, such as collective action and activism, or what we define throughout as to speak power to post-truth. Taken together, we argue that we can effectively counter the purveyors of post-truth and their inventive uses of environmental messages. This requires not only exposing the workings of power in the generation of alternative facts but also in consolidating an alternative edifice of knowledge production, policies, institutions, and relationships that can counter authoritarian politics with new social (and sociocultural) relations. This is not only about building a better, more nuanced version of science via the practice of political–ecological research but also about harnessing more-than-scientific resources in ways that seek to change rather than merely describe the world (Castree, Chatterton, and Heynen 2010).

We call for a sensitivity to the power of both ontological and epistemological politics through which environmental issues are defined and known, and that thereby shape conflicts (Blaser 2013; Escobar 2016). We put forward three pathways—expose, teach and learn, and engage—to show what an effective political–ecological critique in the post-truth moment might look. Our aim is to inspire a response that counters post-truth, to think about

how to engage with the public that form enduring resistance networks to authoritarian power. We caution, however, that this should not be read as a singular prescriptive solution; rather, we advocate for multiple emerging pathways to counter and resist the onslaught of authoritarian post-truth narratives.

Expose

The power of political ecology is that it cuts through post-truth to *expose* it. Political ecology is not alone in this, as there have been many other fruitful attempts to deconstruct science debates in STS.⁷ Political ecology, however, has been at the forefront of calling out the role of powerful authoritarian states, individuals, and corporations who link post-truth discourse to policy and take shortcuts with democratic rights, especially with territorially based and indigenous communities, but also with global planetary health (Batterbury 2016). “Alternative facts” are often central to such efforts. This perhaps involves political ecology's role as the “trickster,” both mimicking and calling out hegemonic science and political discourse (Robbins 2015), but more its willing to use this science to critically think about how truth claims emerge and can be judged.

For example, the framing of climate change brings powerful actors, institutions, and capital together in shaping the political economy of oil (Bridge and Le Billon 2017). This kind of culturally, historically, and politically contextual analysis shows that alternative facts on climate change emerge from within the same relations and logics that perpetuate current capitalist projects, rather than existing as an alternative to a capitalist worldview. This needs to be distinguished from the kinds of alternative ontologies that sit outside of capitalist structuring, such as those that may be practiced by indigenous peoples (Valdivia 2009; Sundberg 2010; Theriault 2017; Anthias 2018). Exposing unsubstantiated “alt. facts” will not suffice, though. The role of political ecologists is to expose power, profit making, and threats to the environment and social justice (Martinez-Alier et al. 2016; Nightingale 2017). This is reflected in the work of environmental justice organizations and other nongovernmental organizations, like the EJOLT project (see <http://www.ejolt.org/project>) and *Accion Ecológica* in Quito, Ecuador, which brave personal risks to expose environmental

injustices and make essential links between scholars and environmental justice activist networks.

Power that coalesces through exposure is not singular but can take many forms. Examples include the Environmental Justice Atlas, or the growing Political Ecology Network initiative (see <https://politicalecologynetwork.org/>), which links academic output to social media and political journalism (see <http://www.aljazeera.com/profile/william-g-moseley.html>). Another way to expose is through collaborative attempts, such as the ENTITLE writing collective, which mainstreams critical environmental scholarship through less-known public and activist stories. It aims to link policymakers, scientific researchers, and activists, “through engagement in movements and institutions” (see <https://entitleblog.org/>). Meanwhile, the network of academics and nonprofits working under the Environmental Data & Governance Initiative (EDGI; see <https://envirodatagov.org/>) are on the front lines exposing authoritarianism threats to progressive U.S. “federal environmental and energy policy, and to the scientific research infrastructure” meant to “investigate, inform, and enforce them” (Dillon et al. 2019).

These efforts are a small sampling of the initiatives taken by political ecologists to link across communities of knowledge. A question that emerges in these efforts is this: Whose voices are privileged and whose are marginalized, even within collaborative projects? It is arguably more important than ever, in an era of post-truth, to use the counternarratives and explanations generated by political ecology offer much by way of evaluating environmental ‘post-truths’ asserted in domains of populist authoritarian politics.

Teach and Learn

Going beyond exposure, political ecology *teaching* and *learning* can expand the impact of our critique of alternative facts. Geographers are learning fast that effective communication can challenge authoritarianism through deliberately networking, publishing, increased social media presence, and, moreover, mobilizing this effectively to students and the broader public. For example, political ecologists have been at the forefront of recent attempts at “decolonizing” how ecology and the Anthropocene (Schulz 2017) are delivered in the classroom and approached by the institutions that structure them

(e.g., Fletcher 2017; Meek and Lloro-Bidart 2017; Meyerhoff and Thompsett 2017; Osborne 2017). These efforts serve to decenter some forms of science as hegemonic ways of knowing, at the same time providing students with the critical skills to place all ways of knowing within the power relations that perpetuate them.

Feminist political ecologists have been at the forefront of the coproduction of knowledge with people outside academia and how values and facts that drive outside involvement combine in everyday politics. Harcourt and colleagues, for example, have overseen a movement to engage feminist political ecology with grassroots organizations worldwide that brought forward insights into how smaller scale, localized resistances to hegemonic economic and political relations can succeed (Harcourt and Nelson 2015). The recently formed WEGO (Well-being, Ecology, Gender and Community) network will collect together knowledge of local communities’ own understandings of strategies to build resilient and equitable futures. This work highlights the coproduction of knowledge to help community and network activists better understand the institutional, economic, and political contexts that serve to support or inhibit their efforts. Scholars engaging in these practices also gain experiential and in-depth understanding of alternative ontologies and visions for a better world. These efforts have shown the importance of scholarship in not only exposing but also learning from community efforts at challenging hegemonic relations of power.

Other efforts at coproduction of knowledge through teaching and learning include the ENTITLE collective’s political ecology syllabus (see <http://www.politicalecology.eu/>) and also POLLEN’s online teaching resources (<https://politicalecologynetwork.org/political-ecology-syllabi/>) that produces scholarship through community building and stimulating dialogue among “diverse communities” (Harcourt and Nelson 2015), albeit ones that are most likely to use Web-based resources for learning. Political ecologists can learn from recent decolonizing efforts that call for new forms of “epistemic disobedience”—political and epistemological delinking of one’s colonial past (Mignolo 2011, 4; Hawthorne and Meché 2016). A good example of this learning in practice through disobedience is the historical problematizing of neoliberal or market conservation that has displaced local practices and knowledges (e.g., Igoe, Sullivan, and

Brockington 2010). The key, however, is to not only bring to light meaningful political ecology research but to integrate this learning, both within the academy (Sundberg 2014) and through broader networks of resistance (Dillon et al. 2019).

Engage

Some political ecologists have taken the notion of learning to another level by trying to translate it directly into policy arenas. For example, Ojha, Paudel, and Dipak (2013) experimented with policy labs in the forestry sector (earlier called *Ban Chautari* but now used beyond the forestry sector to deal with climate and water issues) to generate critical thinking about environmental governance questions for which conventional expertise is inadequate. Policy labs bring together political actors and sectoral specialists (i.e., hydrologists, agricultural officers, and forestry officers) to tackle environmental governance problems. Using Chatham House rules, policy labs are designed to create safe spaces of ignorance, encouraging people to ask questions rather than providing answers. A core concern is to show how different sectors are linked together, the histories surrounding how and why that is the case, and where their agendas are conflicting. This helps to place the issues at stake within a wider contextual frame and can offer opportunities for everyone involved to learn and generate new critical ideas about action.

A renewed focus on rights infuses geographical work, faced with threats that are existential and real and geographical—from border policing to renegeing on international treaties and agreements (Sundberg 2010). Social scientists have a particular duty to call out the broader publics’—from civil society groups and individuals to those marginal or invisible—rights to participation (Neimark and Vermeylen 2017). For instance, the “Political Ecology for Civil Society” open access publication by the ENTITLE group is an excellent example of bridging the gap between activist groups and critical social science (ENTITLE Fellows 2016). Also relevant is the Emancipatory Rural Politics Initiative (ERPI) work on authoritarian populism that looks to provoke debate and action among scholars, activists, practitioners, and policymakers on how “exclusionary politics are deepening inequalities,” through issues of growth, climate disruptions, and social division and focused on generating alternatives to regressive, authoritarian

politics (Scoones et al. 2017). There are even more overt political campaigns that require new alliances and coalitions (de Vrieze 2017) around antifracking, food sovereignty movements, and pollution cleanup (Hudgins and Poole 2014; Cambell and Veteto 2015; D’Alisa et al. 2017).

Yet, new opportunities beyond academia have also opened up. These are particularly in settings less examined by political ecologists but nonetheless at the heart of current political dynamics around post-truth. They include rural white working-class communities who are generally (mis)represented as “conservative, xenophobic, and reactionary” (Van Sant and Bosworth 2017) but that many times also share experiences of marginality and forms of local knowledge with some of the subjects conventionally focused on in political ecology studies (McCarthy 2002). Although political ecology is effective in highlighting political activism and social movements, if anything, it has been historically less successful at delivering its research results in ways that are easily mobilized to diverse political coalitions. It is these diverse political coalitions where we argue that political ecology research if delivered to nonacademic settings can gain traction in countering post-truth narratives.

Public outreach beyond academia is therefore vital. Political ecology’s Public Political Ecology Lab (PPEL) is one important public outreach project (see <http://ppel.arizona.edu>). It narrates the need for practical and political engagement through academic work, providing training on research methods (participatory action research) and pragmatic media and communication skills to activist-minded students and the wider public. It also provides an online forum to make vital connections between community organizations and graduate students for direct impact. Similarly, the rapidly growing Political Ecology Network is now reaching beyond Europe to facilitate exchanges with a number of “nodes” consisting of non-Western institutions, academics, and civil society organizations. As Martinez-Alier et al. (2014) showed, there is a “reverse movement” of concepts and ideas coming from environmental justice organizations to academic political ecology, thereby, “favor[ing] cooperation between activist and academics because they do not compete for the same turf” (49). This demonstrates the potential for scientists, political ecologists, and activists to form essential alliances to counter post-truth discourse and new forms of authoritarianism.

Conclusion

If anything, political ecologists are responding to contemporary authoritarianism, drawing attention not only to injustice but also to social and political resistance through collective action around the world. To be effective, though, we need to move beyond just illustrating obvious tensions that exist within our own practice and praxis. We must question “truth” based on empirically based natural and social science through multiple perspectives, also explicitly amplifying an inclusive, effective, and publicly accessible political ecology that speaks power to post-truth. Crucially, we must continue to explore links between knowledge and authority, in our own scholarship and in other very relevant cognate studies and also with and as we evaluate knowledge claims emanating from different communities globally.

If anything, our collective response to this post-truth moment is to call out the dominant hegemonic discourses that accompany alternative facts through exposure of the links between power and knowledge and through seeding new counterinitiatives. As those on the political far right successfully adopt poststructuralist ideas and techniques and methods of grassroots activism to maintain authoritarianism, political ecologists need once again to reappropriate these methods of public engagement and civil action. This is a long and difficult project and by no means do we pose a single solution here. Yet, our collective goal is to add tactics and analysis, making our scholarship more relevant, accessible, and engaging to populations most likely to suffer from the proliferation of post-truth politics, notably around the denial of climate change and its impacts.

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Notes

1. Since being used by the U.S. president’s special counsel to defend demonstrably false statements by the White House Press Office, the term *alternative facts* has been invoked widely in the media to question the relationship between science and truth. Similarly, President Donald Trump makes personal and repeated dismissals of major international media and research outlets as “fake news.”
2. Although used somewhat interchangeably, we recognize that hegemony and dominant forms of science, and knowledge, are not necessarily always the same (see Guha 1997).
3. Critical political ecology is an open-ended and empirically based approach that combines deconstruction with a realist belief in science as a means to achieve a more accurate description and understanding of environmental realities. This is not the only attempt to do this. In fact, there is a long history of previous work in “critical realism” to integrate sociopolitical values with positivism (see Bhaskar [1975] 1997) and also to some degree in sustainability science (see Clark et al. 2016).
4. We do not provide a review of political ecology but rather a snapshot of some examples of its breadth; for fuller reviews, see Robbins (2011), Bryant (2015), and Perreault et al. (2015).
5. Albeit a key theme in earlier political ecology, our hope is that given the particular political climate of post-truth, more studies today can reemphasize the importance of the emergence of facts simultaneously with values and structure.
6. From this perspective, truth making is more about establishing an effective hegemony (understood as the articulation of different interests around a common cause) than trying to champion a particular constellation of facts.
7. Although STS does include debates around positivist science and many, particularly those geographers and others adopting the language of assemblage, claim that their frameworks do explain the entanglement of facts simultaneously with values and structures, it is critical political ecology that has been more willing to adopt positivist science as a tool to counter dominant scientific claims.

References

- Anthias, P. 2018. *Limits to decolonization: Indigeneity, territory, and hydrocarbon politics in the Bolivian Chaco*. Ithaca, NY: Cornell University Press.

- Batterbury, S. P. J. 2016. Ecología política: Relevancia, activismo y posibilidades de cambio [Political ecology: Relevance, activism and possibilities for change]. *Ecología Política* 50:45–54.
- Benjaminsen, T. A., J. B. Aune, and D. Sidibé. 2010. A critical political ecology of cotton and soil fertility in Mali. *Geoforum* 41 (4):647–56.
- Bennett, J. 2010. *Vibrant matter: The political life of things*. Durham, NC: Duke University Press.
- Bhaskar, R. A. [1975] 1997. *A realist theory of science*. London: Verso.
- Blaikie, P., and H. Brookfield. 1987. *Land degradation and society*. London and New York: Routledge.
- Blaser, M. 2013. Notes towards a political ontology of “environmental” conflicts. In *Contested ecologies: Dialogues in the South on nature and knowledge*, ed. L. Green, 13–27. Cape Town, South Africa: Human Sciences Research Council Press.
- Brannstrom, C., and J. M. Vadjunec. 2013. Notes for avoiding a missed opportunity in sustainability science: Integrating land change science and political ecology. In *Land change science, political ecology, and sustainability synergies and divergences*, ed. C. Brannstrom and M. Vadjunec, 1–23. Abingdon, UK: Routledge.
- Bridge, G., and P. Le Billon. 2017. *Oil*. Oxford, UK: Wiley.
- Bryant, R. L., ed. 2015. *The international handbook of political ecology*. Cheltenham, UK: Edward Elgar.
- Burke, B. J., and N. Heynen. 2014. Transforming participatory science into socioecological praxis: Valuing marginalized environmental knowledges in the face of the neoliberalization of nature and science. *Environment and Society* 5 (1):7–27.
- Burman, A. 2017. The political ontology of climate change: Moral meteorology, climate justice, and the coloniality of reality in the Bolivian Andes. *Journal of Political Ecology* 24 (1):921–38.
- Campbell, B. C., and J. R. Veteto. 2015. Free seeds and food sovereignty: Anthropology and grassroots agrobiodiversity conservation strategies in the U.S. South. *Journal of Political Ecology* 22 (1):445–65.
- Castree, N., and B. Braun. 2001. *Social nature theory, practice, and politics*. Malden, MA: Blackwell.
- Castree, N., P. A. Chatterton, and N. Heynen, eds. 2010. *The point is to change it: Geographies of hope and survival in an age of crisis*. Oxford, UK: Wiley.
- Cavanagh, C., and T. A. Benjaminsen. 2017. Political ecology, variegated green economies, and the foreclosure of alternative sustainabilities. *Journal of Political Ecology* 24 (1):200–216.
- Clark, W. C., T. P. Tomich, M. Van Noordwijk, D. Guston, D. Catacutan, N. M. Dickson, and E. McNie. 2016. Boundary work for sustainable development: Natural resource management at the Consultative Group on International Agricultural Research (CGIAR). *Proceedings of the National Academy of Sciences* 113 (17):4615–22.
- Collingridge, D., and C. Reeve. 1986. *Science speaks to power: The role of experts in policy making*. New York: St. Martin’s.
- D’Alisa, G., A. R. Germani, P. M. Falcone, and P. Morone. 2017. Political ecology of health in the land of fires: A hotspot of environmental crimes in the south of Italy. *Journal of Political Ecology* 24:59–86.
- de la Cadena, M. 2010. Indigenous cosmopolitics in the Andes: Conceptual reflections beyond politics. *Cultural Anthropology* 25 (2):334–70.
- de Vriese, J. 2017. “Science wars” veteran has a new mission. *Science* 358 (6360):159.
- Dillon, L., R. Lave, B. Mansfield, S. Wylie, N. Shapiro, A. S. Chan, and M. Murphy. 2019. Situating data in a Trumpian era: The environmental data and governance initiative. *Annals of the American Association of Geographers*. doi:10.1080/24694452.2018.1511410
- ENTITLE Fellows. 2016. Political ecology for civil society. Accessed January 15, 2016. <http://www.politicalecology.eu/documents/events/94-entitle-manual-may-2016/file>.
- Escobar, A. 1995. Imagining a post-development era. In *Power of development*, ed. J. Crush, 211–27. New York: Routledge.
- . 2016. Thinking-feeling with the earth: Territorial struggles and the ontological dimension of the epistemologies of the South. *AIBR, Revista de Antropología Iberoamericana* 11 (1):11–32.
- Fairhead, J., and M. Leach. 1996. *Misreading the African landscape: Society and ecology in a forest-savanna mosaic*. Cambridge, UK: Cambridge University Press.
- Fletcher, R. 2017. Connection with nature is an oxymoron: A political ecology of nature-deficit disorder. *The Journal of Environmental Education* 48 (4):226–33.
- Forsyth, T. J. 2003. *Critical political ecology: The politics of environmental science*. London and New York: Routledge.
- Foucault, M. 1980. *Power/knowledge: Selected interviews and other writings, 1972–1977*, ed. C. Gordon. London: Harvester Wheatsheaf.
- Goldman, M. J., P. Nadasdy, and M. D. Turner, eds. 2011. *Knowing nature: Conversations at the intersection of political ecology and science studies*. Chicago: University of Chicago Press.
- Gramsci, A. 1971. *Selections from the prison notebooks of Antonio Gramsci*, ed. and trans. Q. Hoare and G. N. Smith. New York: International.
- Guha, R. 1997. *Dominance without hegemony: History and power in colonial India*. Cambridge, MA: Harvard University Press.
- Guthman, J., and B. Mansfield. 2013. The implications of environmental epigenetics: A new direction for geographic inquiry on health, space, and nature-society relations. *Progress in Human Geography* 37 (4):486–504.
- Harcourt, W., and L. L. Nelson, eds. 2015. *Practicing feminist political ecologies: Moving beyond the “green economy.”* London: Zed.
- Harding, S. 2008. *Sciences from below: Feminisms, postcolonialities, and modernities*. Durham, NC: Duke University Press.
- Hawthorne, C., and B. Meché. 2016. Making room for black feminist praxis in geography. *Society and Space*. Accessed January 15, 2017. <http://societyandspace>.

- org/2016/09/30/making-room-for-black-feminist-praxis-in-geography/.
- Hudgins, A., and A. Poole. 2014. Framing fracking: Private property, common resources, and regimes of governance. *Journal of Political Ecology* 21 (1):303–19.
- Hulme, M. 2010. Problems with making and governing global kinds of knowledge. *Global Environmental Change* 20 (4):558–64.
- Igoe, J., S. Sullivan, and D. Brockington. 2010. Problematizing neoliberal biodiversity conservation: Displaced and disobedient knowledge. *Current Conservation* 3 (3):4–7.
- Jasanoff, S. 2006. Just evidence: The limits of science in the legal process. *The Journal of Law, Medicine & Ethics: A Journal of the American Society of Law, Medicine & Ethics* 34 (2):328–41.
- King, B. 2010. Political ecologies of health. *Progress in Human Geography* 34 (1):38–55.
- Kosek, J. 2006. *Understories: The political life of forests in northern New Mexico*. Durham, NC: Duke University Press.
- Kuhn, T. S. 1970. *The structure of scientific revolutions*. 2nd ed. Chicago: University of Chicago Press.
- Mair, J. 2017. Post-truth anthropology. *Anthropology Today* 33 (3):3–4.
- Martinez-Alier, J., I. Angelovski, P. Bond, D. Del Bene, and F. Demaria. 2014. Between activism and science: Grassroots concepts for sustainability coined by environmental justice organizations. *Journal of Political Ecology* 21 (1):20–60.
- Martinez-Alier, J., L. Temper, D. Del Bene, and A. Scheidel. 2016. Is there a global environmental justice movement? *The Journal of Peasant Studies* 43 (3):731–55.
- McCarthy, J. 2002. First world political ecology: Lessons from the wise use movement. *Environment and Planning A* 34 (7):1281–1302.
- Meek, D., and T. Lloro-Bidart. 2017. Introduction: Synthesizing a political ecology of education. *The Journal of Environmental Education* 48 (4):213–25.
- Meyerhoff, E., and F. Thompsett. 2017. Decolonizing study: Free universities in more-than-humanist accompliceships with Indigenous movements. *The Journal of Environmental Education* 48 (4):234–47.
- Mignolo, W. 2011. *The darker side of Western modernity: Global futures, decolonial options*. Durham, NC: Duke University Press.
- Li, T. M. 2007. *The will to improve: Governmentality, development, and the practice of politics*. Durham, NC: Duke University Press.
- Nagel, A. 2017. *Kill all normies: Online culture wars from 4chan and Tumblr to Trump and the alt-right*. Winchester, UK: Zero Books.
- Neimark, B. D., and S. Vermeylen. 2017. A human right to science?: Precarious labor and basic rights in science and bioprospecting. *Annals of the American Association of Geographers* 107 (1):167–82.
- Nightingale, A. 2006. The nature of gender: Work, gender, and environment. *Environment and Planning D: Society and Space* 24 (2):165–85.
- . 2017. Power and politics in climate change adaptation efforts: Struggles over authority and recognition in the context of political instability. *Geoforum* 84:11–20.
- Ojha, H. R., N. S. Paudel, and B. K. Dipak. 2013. Can policy learning be catalyzed? Ban Chautari experiment in Nepal's forestry sector. *Journal of Forest and Livelihood* 10 (1):1–27.
- Osborne, T. 2017. Public political ecology: A community of praxis for earth stewardship. *Journal of Political Ecology* 24 (1):843–60.
- Peet, R., and M. Watts. 1996. *Liberation ecologies: Environment, development, social movements*. London and New York: Routledge.
- Peluso, N. L., and M. Watts, eds. 2001. *Violent environments*. New York: Cornell University Press.
- Perreault, T., G. Bridge, and J. McCarthy, eds. 2015. *The Routledge handbook of political ecology*. London and New York: Routledge.
- Popper, K. R. 1971. *The open society and its enemies*. London and New York: Routledge.
- Robbins, P. 2011. *Political ecology: A critical introduction*. Oxford, UK: Wiley.
- . 2015. The trickster science. In *The Routledge handbook of political ecology*, ed. T. Perreault, G. Bridge, and J. McCarthy, 89–101. London and New York: Routledge.
- Robertson, M. M. 2006. The nature that capital can see: Science, state, and market in the commodification of ecosystem services. *Environment and Planning D: Society and Space* 24 (3):367–87.
- Rocheleau, D. E. 2008. Political ecology in the key of policy: From chains of explanation to webs of relation. *Geoforum* 39 (2):716–27.
- Rocheleau, D., B. Thomas-Slayter, and E. Wangari. 1996. Gender and environment: A feminist political ecology perspective. In *Feminist political ecology: Global issues and local experiences*, ed. D. Rocheleau, B. Thomas-Slayter, and E. Wangari, 3–26. New York: Routledge.
- Schulz, K. A. 2017. Decolonizing political ecology: Ontology, technology and “critical” enchantment. *Journal of Political Ecology* 24 (1):125–43.
- Scoones, I., M. Edelman, S. M. Borras, Jr., R. Hall, W. Wolford, and B. White. 2017. Emancipatory rural politics: Confronting authoritarian populism. *The Journal of Peasant Studies* 45 (1):1–20.
- Stott, P., and S. Sullivan. 2000. *Political ecology: Science, myth and power*. London: Edward Arnold.
- Sullivan, S. 2017. What's ontology got to do with it? On nature and knowledge in a political ecology of “the green economy.” *Journal of Political Ecology* 24 (1):217–42.
- Sundberg, J. 2010. Diabolic caminos in the desert and cat fights on the Río: A posthumanist political ecology of boundary enforcement in the United States–Mexico. *Annals of the Association of American Geographers* 101 (2):318–36.
- . 2014. Decolonizing posthumanist geographies. *Cultural Geographies* 21 (1):33–47.
- Therriault, N. 2017. A forest of dreams: Ontological multiplicity and the fantasies of environmental government in the Philippines. *Political Geography* 58 (58):114–27.

Valdivia, G. 2009. Indigenous bodies, indigenous minds? Towards an understanding of indigeneity in the Ecuadorian Amazon. *Gender, Place & Culture* 16 (5):535–51.

Van Sant, L., and K. Bosworth. 2017. Intervention—Race, rurality, and radical geography in the U.S. *Antipode Online*. Accessed September 1, 2017. <https://wp.me/p16RPC-1Da>.

Watts, M. 1983. *Silent violence*. Berkeley: University of California Press.

Wolford, W. 2010. *This land is ours now: Social mobilization and the meanings of land in Brazil*. Durham, NC: Duke University Press.

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