

DEMOCRACY BETWEEN PLURAL KNOWLEDGE SYSTEMS



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In the twenty-first century, we are confronted with the problem of an urgent climate crisis, for which we need to identify and decide upon the correct responses. At the heart of the crisis is a production system that is guided by a logic of rational production. This logic views nature as a “resource” to be optimized in terms of standardized mass production, to be sold at low prices yet yield great profit. Viewing nature as a resource assumes an unlimited supply available for production, which seems irrational at first. But the system of continuous new scientific knowledge creation that has generated synthetic substitutes for natural products has made it work, that is until now. The realization in the last few decades that these substitutes are not only *not* biodegradable, but also have the capacity to harm living nature in devastating ways, and that no layer of the natural environment, from the lithosphere to the atmosphere, can escape that harm, is one of the points of crisis. The other stems from the fact that the resources required to power the technologies developed from scientific knowledge are usually non-renewable fossil fuels that are being used continuously by a fundamentally consumerist society. The emissions arising from the use of these technologies are possibly the most significant causes of the climate crisis. While there is now greater

investment in green technologies, the pace of this investment is not nearly as fast as it needs to be, as the earlier returns on investment in fossil fuels have yet to be fully realized; additionally, patterns of consumption are not expected to change soon.

Modern knowledges, however, have undoubtedly also built positive imaginations — of saving human labor (e.g., washing machines, harvester combines), of the good life (e.g., heating and cooling systems, the automobile), previously unimaginable machinery that has made life so exciting (airplanes and computers) — and have also introduced the ability to explore and understand nature much better (microscopes, advanced experimentation, and satellites). They have also expanded the understanding of nature and the universe, allowing everyone to understand — contrary to the oppressive authority of the church over knowledge in earlier times. Science has democratized knowledge such that it can be learned and practiced by everyone. These are radical achievements in human history, enabled and sustained by the power of the modern nation-state and big capital.

There are two problems related to the making and practice of this knowledge, however. All new knowledge created in science is to be created by “experts” who have the authority to create this new knowledge: science is for the common person, but not of and by them. This has implied a sharp distinction between theory and practice. Further, knowledge about nature has become knowledge *over* nature — about using, controlling, and replicating nature. So, in fact, these are undemocratic aspects of science but, given legitimacy by the powers that be, these aspects have become the common sense of the modern period. And it is the latest and most extreme version of this common sense that is responsible for what we call the climate crisis today. This status quo and its impact on the earth have been summarized well by Rockström et al. (2023, p. 102):

Humanity is well into the Anthropocene, the proposed new geological epoch where human pressures have put the Earth system on a trajectory moving rapidly away from the stable Holocene state of the past 12,000 years, which is the only state of the Earth system we have evidence of being able to support the world as we know it. These

rapid changes to the Earth system undermine critical life-support systems, with significant societal impacts already felt, and they could lead to triggering tipping points that irreversibly destabilize the Earth system. These changes are mostly driven by social and economic systems run on unsustainable resource extraction and consumption. Contributions to Earth system change and the consequences of its impacts vary greatly among social groups and countries. Given these interdependencies between inclusive human development and a stable and resilient Earth system, an assessment of safe and just boundaries is required that accounts for Earth system resilience and human well-being in an integrated framework.

During the time that the production system described above developed in practice, a large part of humanity continued using inherited systems of production, consumption, and distribution. A range of knowledge systems — for growing food, making clothing, building homes, healing the sick, crafting tools and a range of machinery — were able to support smaller communities, efficiently and equitably, in terms of basic needs. Some of these knowledge systems also developed large production capacities such that they were able to trade in substantial quantities with markets far across the world, for example, handwoven cloth from India. Two characteristics marked these systems. The first was the belief that all human beings are part of nature and dependent on her bounty, so using the resources of nature required prudence; likewise, nature was dependent on us to regenerate, so the relationship between human beings and nature was one of interdependence. The second was that knowledge of production was carried by producers themselves, who not only inherited the learning, but also were considered capable of creating new knowledge — as innovation or in completely new frames. So, while there were hierarchies amongst practitioners, there wasn't a complete divide between the creation of knowledge and its practice. In these two respects, non-modern knowledges were deeply democratic. While they were also clearly used by human beings to further their own interests, the self-limiting character of these knowledge systems, through clear principles and restraints on usage of natural resources, respected the regenerative cycles of nature, thus not destroying it.

With the mounting hegemony of modern knowledge of production beginning about three hundred years ago, however, these systems were declared obsolescent and, because they could not match the quantities and prices of the new products, were competed out of existence. But in some places they have survived, even thrived, because people continued to believe in and rely on what they had. These people adapted their inherited knowledges to contemporary situations, making adaptations in the technical/economic aspects of production, consumption, and distribution, and mobilizing communities towards these ends, while trying to remain faithful to the world views of their knowledge systems. These world views rested on the fundamental relationship of respect for and the awareness of being an integral part of the natural world, as indicated above. This enabled human beings to use resources from nature carefully, then leave it to regenerate as a matter of principle so that it could be used again. This idea manifests itself in different ways depending upon the context. In Hindu philosophy, for example, nature, which is comprised in five forms — earth, water, fire, air, and space — is to be found in the human body. So, the individual is a microcosm of the universe. Hence, the survival of the individual depends upon and is contingent upon the survival of all natural forms, which includes other human beings in society. The circle of life is therefore complete by human beings connecting to all other living forms, making each one's survival equally important. This worldview, when manifest in production systems, makes for specific kinds of practices of production, consumption, and distribution.

The core principles of these “non-modern” knowledge systems are thus local production and consumption, though there are well-recorded systems of trade with distant places in the pre-modern period, through routes like the Silk Road. Local ecology guided production, whether of agriculture, metal work, cloth, or pottery; it influenced practices of seed saving and seed sharing, the very careful collection of medicinal plants or any forest produce such that the plant source is never destroyed; using clay from local waterbodies and not from afar for the making of utensils; using thread that comes from local cotton or mulberry trees for weaving — a range of everyday practices that reiterates the relationship of interdependence between human beings and nature. These core principles

of production also made for a special virtue of the products — that of their great diversity and variety, reflecting the diversity of the natural ecological zones they came from. The emphasis on detail was primary, and the quality of a product was judged by it adhering to the principles of the overall system of production, rather than everything looking perfectly the same or homogenous. Hence products were both very diverse and of very high quality. Patterns of consumption, too, were different. By and large, things produced within a limited radius were consumed within that radius, given that each ecological zone would have its own production system according to the resources nature gave it. This is how communities living in what we describe as deserts can be so abundant and rich (Mishra, 2016).

What made these production and consumption systems possible was the significant knowledge held by these communities — of the sources of water and how to manage them to fulfil human needs; of the specific plant varieties that could grow in different soils and seasons; of different forms of pest management (with natural pesticides and through multi-cropping); of varieties of building techniques using the best local materials (mud, grass, wood, stone, lime), of adapting solar energy to construct dwellings that provided protection and comfort through all kinds of weather — there were numerous kinds of knowledge. It's possible that the technical genius and veracity of these knowledges have yet to be understood in all of their complexity. Further, how the products from these systems were distributed and the systems of circulation that made them "viable", even profitable for the producers, has been documented in some parts of the world by historians of trade, customary law, and community environmental practices. These studies need to be revisited to see to what extent these production systems survive, why they declined, and what factors can be worked on to revitalize them. It is important to make the current ecosystem amenable to allow these systems to function again so that their primary virtues of decentralization, diversity, and democratic production can be made significant again.

Whenever this argument is made, however, the response is the fear that there is an urge to turn the clock back on progress in a regressive way. It is important to remember that there is never the possibility of

turning the clock back, but it is possible to affect an adaptation of these knowledge systems to our contemporary time, through their recovery and revitalization. The irony is that in many parts of the world considered “underdeveloped” these knowledge systems still survive in some measure, and this revitalization process will be easier to affect than in many societies that have marched far along the development trajectory. They can turn being neglected by modern development processes into an actual advantage here, because the revitalization process can help them move straight into a sustainable future.

The third important aspect of the practice of these knowledges was the way the communities organized the principles on which resources would be used, exchanged, shared, and even donated. Nature worship was one of the earliest practices for this reason — treating some parts of the commons as sacred meant that if they were used in any way it would represent abuse and lead to censure. Hence sacred groves, ponds, and hills were part of the discourse of commons expressly held for the common good. Across the world, these principles are recognizable in different phrases like *buen vivir*, *ubuntu*, and *swaraj* (Kothari, 2019), which treat what is available in nature as commons, to be held by everyone, with elaborate principles and systems of usage and reciprocity built into them, within the cycles of nature. These commons were also administered and negotiated locally, and also between communities that had reciprocal contributions to each other’s production systems, for instance between settled farming communities and nomadic herders. Political consolidation of empires notwithstanding, these rules of custom were rarely disturbed, because those who ran kingdoms understood and accepted that the logic of managing the commons had to be a local system.

The three aspects I’ve described above demonstrate how knowledge held by people and communities across the world for millennia had democratic elements in its practice. These systems could accommodate differences between them because practices were guided by the logic of different kinds of nature to which the systems belonged. This also enabled exchange of knowledge and information between the communities, collaboration and cooperation, and mutual learning and sharing even across far-flung communities long before the age of

modern communication. The virtues of these systems therefore make such knowledge traditions significant potential contributors to responses to the climate crisis.

At the same time, it is important to address and confront the many undemocratic aspects of these knowledges in practice. These are undemocratic practices relating to gender, caste, indigenous people, and class, depending upon the context. The very worldviews of nature and production that I have celebrated above also carried elements of deep discrimination against women and instituted hierarchies of power between and within different communities of production. These undemocratic aspects are often veiled and justified, but when these systems are examined closely and critically, this division entrenched through the binaries of gender and other ascriptive descriptions can easily be challenged. Using the modern concept of equality, which is enshrined in modern constitutions, this is a challenge that needs to be taken up politically, in all spheres of the economy: in production, consumption, and distribution. Women and other previously forbidden groups taking up work in these production systems, for example, have initiated such changes. I believe that the exciting prospect of a contemporary revitalization of these knowledge systems offers an opportunity to democratize them in these respects, while accessing and adapting the other valuable parts.

So then, how does this essay help us understand a democracy of knowledges? And what does that have to do with democracy? Faced with the climate crisis, a need to recognize the value of non-modern knowledge systems is being felt world-wide, including in the international climate reports written by scientists. But the hierarchy of knowledges in most societies — that is the undemocratic relationship that exists between modern and non-modern knowledges — prevents actualization. Therefore, a democracy of knowledges would mean two things. First, democratizing the relationship between science and other knowledges by expanding the democratic imagination to include the “pluriverse of knowledges” rather than merely the “Universe of Science.” This would do away with having to choose between the two and would not represent a “turning back” from one to the other. The second would emerge from revitalizing non-modern knowledges that rest on the interdependent relationship between human

beings and nature; asserting interdependence with rather than mastery over nature would democratize the relationship between human beings and nature. Just as democracy for human beings is based on human rights, this democratic imagination of rights could be expanded to equally include everything in nature, such as rivers, forests, oceans, deserts. Thus a unique and new facet of democracy would foundationally address the most urgent crisis of our time, the climate crisis.

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