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# Of Social Movements, Human Rights and Electricity Access:

# Exploring an Indigenous Civil Resistance in Chiapas, Mexico

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#### Abstract

Alongside Sustainable Development Goal 7 and related policies, another potential strategy for enhancing access to energy services that are reliable, high quality, affordable, sufficient, sustainable and modern consists in theorizing and establishing "energy rights". In critical dialogue with other attempts to theorize and implement a right to energy, we propose that it is possible to theorize a human right to electricity access from the perspective of social groups, experiences, and worldviews from the Global South. To support this claim, we present the case study of Luz y Fuerza del Pueblo (LyFdP), a social movement operating in the state of Chiapas, southeastern Mexico. We show that this organization's understanding of and approach to electricity depends on the convergence of Mayan cosmovisiones (worldviews) and Christian views mediated by Liberation Theology. Members conceive electricity as both a part of the whole and a fundamental entitlement that should not become marketable or be linked to capital accumulation. Moreover, the movement presents a non-hierarchical structure, has a strong commitment to territory control, an anti-capitalist attitude, a keen focus on cooperation, and implements "politics of place". We argue that both the worldview and the type of socio-political arrangement of LyFdP as well as the lived experience of its members suggest the possibility of theorizing a specific right to electricity access. Overall, our findings and proposal can benefit energy scholars and practitioners who are interested in exploring, defining, implementing and enforcing a specific right to electricity in more pluralistic and inclusive ways.

**Keywords**: Luz y Fuerza del Pueblo, Mexico, human right to electricity access, energy poverty, anthropology of energy, Global South

#### 1. Introduction

The current sociotechnical energy transitions from systems based primarily on fossil fuels to alternative and cleaner power sources [1–3] serve two fundamental and interrelated goals. First, given the great social and environmental impacts of energy generation, distribution, use and waste, these transformations are considered fundamental to curbing greenhouse gas emissions, an essential step toward mitigating anthropogenic climate change [4]. Second, these transformations are supposed to be just [5,6], for example by enabling an increasing number of disadvantaged people to access energy, which will preferably be sustainable and renewable. Most energy scholars as well as the major Declarations and Reports by the United Nations on the topic of energy access [7][8][9] support the thesis that an adequate energy supply is a key prerequisite for economic, cultural and social development in complex societies.<sup>1</sup> Specifically, the Sustainable Development Goal 7 (SDG7) stresses the importance of ensuring "access to affordable, reliable, sustainable and modern energy for all" [12].<sup>2</sup> Although what exactly constitutes "modern energy for all" remains debatable, improving access to energy services that are sustainable "uninterrupted, high quality, affordable, and sufficient" [13] is generally recognized as a key requirement for human development, and especially needed in energy poor contexts [14,15] including "energy peripheries" [16]. To better appreciate the massive and enduring inequalities in energy access among countries, it is useful to consider the Global Multidimensional Poverty Report [17,18] or the more specific Multidimensional Energy Poverty Index (MEPI) [19]. These and other similar analytical tools assess the complex phenomenon of energy poverty through a comprehensive collection of data on relevant indicators (as far as possible), such as access to

<sup>&</sup>lt;sup>1</sup> The Millennium Development Goals Report [11] and even more explicitly the Sustainable Development Goals Report [12] also address issues of energy poverty and access as they relate to sustainable human development.

<sup>&</sup>lt;sup>2</sup> SDG7 "seeks to promote broader energy access and increased use of renewable energy, including through enhanced international cooperation and expanded infrastructure and technology for clean energy" [12]. See also: <u>https://sdgcompass.org/sdgs/sdg-7/</u> and <u>https://sustainabledevelopment.un.org/sdg7</u>.

adequate caloric intake (nutrition), cooking fuels, or electricity. The importance of energy access is also supported, though indirectly, by many empirical studies that compare energy consumption and various indicators of human wellbeing (or human development).<sup>3</sup> The resulting plot shows a "plateau" [22] or a "saturation curve" signifying the thresholds where these two variables begin to decouple [23,24]. Apart from highlighting that any additional energy consumption does not significantly improve the indicators for wellbeing, such studies emphasize how crucial energy access is to these indicators, particularly in so-called "energy poor" countries [25].

However, international provisions and national policies aimed at overcoming energy poverty may dismiss that people have a certain understanding of "what energy is for" [26], thus potentially forcing on stakeholders some policy orientations instead of others. Whether this is done explicitly and voluntarily or not, the result can be the imposition of partial or dominant perspectives. Debates about formulations such as "energopower" [27], "energopolitics" [28–30] or "carbon democracy" [31] share a similar concern for the ethical and political dimensions of energy where recognition and procedural types of energy justice are particularly at stake [32]. Furthermore, a growing body of work in the energy humanities [33,34], anthropology of energy<sup>4</sup> [35–37], energy justice [32] and normative energy ethics [38–41] has been stressing the importance of attending not only to the energy requirements of different groups of people in different contexts, but also to the values, preferences and lifestyles of all affected stakeholders within energy projects.

This article contributes to the ongoing debate on energy rights as ethical and legal tools to make the right to energy access concrete. Although a few scholars have already investigated the topic of

<sup>&</sup>lt;sup>3</sup> However, potentially unwarranted assumptions in the use of energy consumption as an indicator have already been suitably criticized [21]. This is also why it is preferable to focus on concrete access to energy services. Moreover, we are aware that conceiving electricity as an energy service rather than an energy carrier may be controversial [22].

"energy rights", we see a gap in the literature regarding ways of theorizing such rights from the perspective of the Global South. In this article, we stress that the task of theorizing energy rights should not constitute a monolithic, ethnocentric endeavor, but rather can benefit from different perspectives. The intention is therefore to broaden and complement existing theoretical foundations for energy rights. Our goal is to show that the case study examined in this paper provides a remarkable example of an alternative conceptualization of a right to electricity access. The research question that guides our investigation is twofold. First, is it possible to ground a right to electricity access in a non-commodified view of nature? Second, can the relational worldview exhibited by the Mexican social movement Luz y Fuerza del Pueblo (LyFdP) provide an alternative foundation for such a right? To address these questions, we present an ethnographic study conducted between 2016 and 2019 by U. Cao. in the state of Chiapas, in southeastern Mexico, which focused especially on how electric power is accessed and managed by the local social movement LyFdP [42].

Following the introduction, we situate our contribution from a theoretical perspective by surveying the work of scholars who have already investigated the topic of energy rights (2.1) as well as others who have researched local indigenous resistance movements to energy developments (2.2). In section 3, we present the normative setting and the sociopolitical dimensions of the Mexican energy context. In Section 4, we clarify the research materials and methods employed in the case study. In section 5, we present the ethnographic case of LyFdP, describing its socio-political structure, organization and worldview. Here, we also highlight the motivations behind LyFdP approach to activism and electricity in connection to the political dimensions of their electricity resistance. Finally, in Section 6, we argue for a specific "human right to electricity access" based on three interdependent theoretical foundations that are drawn from LyFdP's members approach to electricity: a) energy as a primordial, supernatural gift; b) a relational ontology; and c) a non-commodified view of nature.

#### 2. Literature Reviews

#### 2.1 The Quest for Energy Rights: Towards a Common Definition

A few authors have been exploring ways to provide a robust theoretical foundation for a "right to energy" to be implemented in laws, declarations, formal documents and policies. Our reading of the literature suggests that most of these attempts can be situated within two key fields of study: energy poverty<sup>5</sup> and energy justice.<sup>6</sup> However, there is no consensus yet on what type of entitlement such a right corresponds to. Should it be regarded as a moral right, a legal right, or both? Should it be framed as a human right, a consumer right, or a socio-economic right? Despite the ongoing debate, approaching energy access through the language of rights seems promising overall, as it mirrors already successful attempts to theorize and implement a human right to water [46].<sup>7</sup>

A survey of the emerging literature on energy rights suggests that several theorists recognize the need for more specific definitions. In this direction, for example, Tully argues for a "human right to electricity access" [48] or, more generally, the "right to access clean energy" [49]. Similarly, Freling advocates for "energy as a human right" [50]. More recently, Walker has proposed a more nuanced understanding by stressing why energy is really valued [51]. He underscores that what people really value is not "energy" but the specific energy services provided by the access to it (e.g., heating, cooling, lighting, mobility, communication, cooking). It is indeed clear that energy services directly contribute to people's wellbeing, making them "able to achieve a range of basic capabilities" [25,52]. From a legal

<sup>&</sup>lt;sup>5</sup> In this article, we follow the capability-based definition of energy poverty provided by Day et al. [44]. For the adoption of the Capability Approach in the context of Mexican wind farms see also [45].

<sup>&</sup>lt;sup>6</sup> Regarding energy justice, our article hopes to contribute to the recent call for a greater societal impact of the energy justice discourse [46].

<sup>&</sup>lt;sup>7</sup> On 28 July 2010 the United Nations General Assembly officially established the Human Right to Water and Sanitation (HRWS) though Resolution 64/292. See [48].

perspective, Hesselman et al. have inquired into what a right to energy "might mean in practice, including when accepted as a legally binding (human) right" [13]. In a recent encyclopedia article, Hesselman discusses "how international law, European Union law and national law has so far responded to questions of universal household energy access and energy poverty" [48]. She notes, for example, that in 2017 the EU recognized that every person has a "right to access essential services of good quality" and that support has to be "available for those in need" [53]. Somewhat in line with Walker's proposal, Frigo et al. argue that the Capabilities Approach may provide an appropriate theoretical foundation for a "human right to access necessary energy services." Following Hesselman's perspective, they also recommend that this type of right should be integrated in the United Nations international framework of human rights as well as within emerging provisions of international energy law [25].

These and similar attempts to define and frame energy rights seem to share at least three characteristics. First, they prioritize *practical* applicability at the expense of clarifying the theoretical foundations of such entitlements, that is, issues of metaethics (as an exception to this, see [25]). Second, energy rights seem to be assumed, at least potentially, as *universal* or *global* entitlements applicable to all users or people. Of course, it is understandable that the language of rights comes across as "universal" because such vocabulary has become familiar through the adoption of various rights in international declarations. However, it is important to point out that rights theories have in fact been contextual intellectual endeavors. They have been developed primarily by European and North American scholars and then "exported" worldwide, carrying the risk of being forms of Western cultural hegemony or imperialism [54].<sup>8</sup> This is why we suggest the need to inquire into alternative theoretical

<sup>&</sup>lt;sup>8</sup> In a section entitled "Human rights and cultural diversity", Jones observes that "a feature of the world which is often associated with ideas of community and which is sometimes thought to embarrass proponents of human rights is *cultural diversity*. The world is characterized by different cultures embodying different world-views and systems of value" [55]. He

foundations to complement those already in existence. Third, most theories about energy rights rely on an unquestioned assumption where nature is framed as natural resources and these are viewed as commodities that should be protected and guaranteed for the sole purpose of human use.

Our proposal draws from these antecedents and aims to complement them. Following Tully [48], we emphasize that the formulation we embrace here is "human right to electricity access." Moreover, we maintain that such a right must be understood as fundamentally linked to the *provision* of electricity in order to achieve necessary energy services [25]. We choose this formulation because: a) electricity can directly provide an array of other energy services (e.g., cooking, heating, cooling, communication, access to information); and b) electricity is an implicit element of the rights to both adequate housing and health [48].

#### 2.2. Local and Indigenous Resistance Movements in the Anthropology of Energy

The 1970s and 1980s saw the emergence of the so-called second generation of anthropologists of energy [27]. This group comprised scholars that shared deep concerns about the cultural, social and environmental impacts of energy developments on indigenous communities. In this vein, several researchers have studied various forms of resistance and insurgence against specific projects or specific sources of power generation (e.g., nuclear or coal) in both the Global South and North [55–57].

In Mexico, many studies have extensively investigated local and indigenous resistance against the development of wind farm megaprojects. The Isthmus of Tehuantepec is known as one of the windiest places in the world and is thus the scene of a large-scale wind energy development plan. In this context, Howe et al. have offered one of the most compelling accounts of the failure of what would

suggests that some degree of hesitation in applying rights to different human groups is appropriate and highlights that, in any case, being attentive to people's self-understanding is in line with human rights thinking.

have been Latin-America's largest single-phase wind park – the Mareña project – in the face of tenacious local resistance [58]. Zárate-Toledo et al. have analyzed how the wind energy development promoted by the Mexican government and multinational companies, falls into an extractive model, with no consideration of local cultures and organizations [59]. In addition, Dunlap has highlighted how "soft" and "hard" techniques of counterinsurgency were implemented to overcome resistance against the Bíi Hioxo wind park in Juchitán de Zaragoza – a development eventually completed in 2014 [60].

In the context of Chiapas, Collier is one of the few researchers who have clearly addressed the direct connection between the 1994 Zapatista armed uprising and controversial energy developments implemented in the wake of the oil boom of the early 1970s [61]. He reports that such developments dramatically worsened the conditions of environmental scarcity that a number of scholars have recognized as one of the fundamental causes of the insurrection of the Zapatistas [62–64]. The case of LyFdP undoubtedly belongs to the overall political and socioeconomic context in which that uprising emerged. Nevertheless, it is quite distinctive because, while its activists specifically stand up for access to electricity, they neither oppose any specific power plant project nor seek a *levantamiento* (i.e., revolt).

In summary, the literature review proposed in section 2.1 showed that the definition of energy rights is still problematic and requires further inputs. In particular, we pointed out that most theorizations fall into three main limits: they privilege practical applicability over theoretical foundations; they aspire to be universal, but in fact, their claims come exclusively from the global north; they rely on a commodified view of nature. In section 2.2, we recalled several cases of opposition by local groups in the global south - particularly indigenous people from Mexico - to electric energy development projects inspired by ethnocentric and extractivist approaches. And finally, we referred to the dramatic consequences of such a kind of initiatives in the state of Chiapas, as triggers for the

Zapatista insurrection in 1994, as well as predisposing factors for the emergence of LyFdP later on. In the following section, we provide an overview of the Mexican energy context.

#### 3. Energy Poverty and (In)Justice in Mexico: The Normative Setting

In order to facilitate contextualization, this section discusses three main aspects of energy poverty and injustices in Mexico. First, we describe the constitutional framework of energy provision and underscore the lack of policies to address and mitigate energy poverty. Second, we examine how keyenergy reforms have benefitted specific corporate interests and harmed the historical legacy of collective ownership of land. And third, we zoom in and highlight the impact of the two previous aspects on indigenous people, and especially in Chiapas.

Although the Mexican Constitution recognizes a universal right "to water access, provision and sanitation" [66, article 4, 10], it does not mention any rights related to energy. Article 4 does state that "every family has the right to enjoy adequate and decent housing" (ibid.), and the Law on Housing that derives from this constitutional right refers to electricity, though only once and in quite vague terms. It affirms that state authorities will "promote" the development of housing "actions" ("acciones"), "taking into consideration" ("se considere") that

houses should have sufficient living spaces and auxiliary spaces according to the number of inhabitants, and should have drinking water, sewage and electricity to contribute to the reduction of disease vectors, as well as guarantee structural security and adaptation to the climate with the criteria of sustainability, energy efficiency and disaster prevention, preferably using standardized goods and services [67, article 71, our translation].

Four observations may be drawn from these passages. First, the right to adequate and decent housing is recognized for families, not individuals, raising doubts about whether this right is in fact universally recognized for single persons. Second, state authorities are under no obligation to ensure any of the conditions or services that make a house "adequate and decent": they rather give themselves the

(unusual) role of raising awareness. Third, the only reference to electricity is for purposes related to mere biological survival and public health concerns. And fourth, there is a significant inconsistency in that the Law on Housing refers to energy efficiency several times (article 71) (ibid.), renewable energies (article 71) (ibid.) and energy savings (articles 78 and 83) (idem: 28-29), and yet it does not mention any actual measures to ensure that some kind of affordable energy is available and accessible to people. Inadequate or nonexistent policies on energy poverty and justice are especially troublesome in a country like Mexico, where in 2018 41.9% of the population (52.4 million people) still lived in multidimensional poverty and 7.4% (about 9.3 million people) in extreme multidimensional poverty [67]. Unsurprisingly, a recent attempt to measure energy poverty in Mexico shows that 7.2% of the country's households (over 2.17 million) are in conditions of "strong energy poverty" (i.e., they are deprived of four out of six energy services that the study considers "basic to satisfying people's basic *needs*"). In addition, 5.6% (1.687 million) are in conditions of "extreme energy poverty" (i.e., deprived of five out of six "basic" energy services) [68].

From historical and political-economic perspectives, it is important to recall that the entire Mexican energy sector underwent a robust liberalization process starting in the 1990s and culminating in the ad-hoc constitutional reform promulgated in December 2013. This was the third wave of structural reforms urged by the International Monetary Fund (IMF) and the World Bank (WB) [69]. Most notably, the Energy Reform transformed the state-owned companies *Comisión Federal de Electricidad* (CFE, the national electric utility) as well as *Petróleos Mexicanos* (PEMEX, the national petroleum company) into "State Productive Enterprises". This means that although they remain a state property, they now possess a special legal status that entitles them to exercise a higher degree of autonomy and a for-profit approach [65,70]<sup>9</sup>.

The introduction of the reform was not free from criticisms and protests among large political sectors as well as civil society [71]. One of the most controversial points is the 8<sup>th</sup> Transitional Article [65]. It states that because of their "strategic" nature, the activities of exploration and extraction of oil and other hydrocarbons as well as the public service of transmission and distribution of electricity "are considered to be of social interest and public order, and will therefore take precedence over any other activity involving the use of the surface and subsoil of the land affected by them" (idem: 272). As some Mexican scholars have already observed, these provisions may pose an existential threat to the collective ownership of land held by agricultural units such as the *ejidos*<sup>10</sup> and, in general, will negatively affect the rural communities that occupy about half of the national territory [72,73]. It is no coincidence that the Energy Reform also amended Article 27 of the Constitution – which was at the heart of the land reform launched by the post-revolutionary constitution of 1917 – authorizing private participation in the energy sector [65]. Such an alteration of the historical legacy of Mexican commons and these modifications to collective and state property rights led Núñez Terrones et al. [72] to regard this energy reform as an expression of what Harvey has defined as "accumulation by dispossession" [74]. This happens when complex institutional interventions and legal frameworks are set up for both projecting power in space and for supporting and encouraging the expanded reproduction of capital [72].

<sup>&</sup>lt;sup>9</sup> More specifically, private companies were for the first time allowed to obtain licenses for electricity generation (article 10, C, of the Energy Reform) [66]). Moreover, private entrepreneurs were permitted to perform, on behalf of the state, "the founding, installation, maintenance, management, operation and expansion of the required infrastructure to ensure the public service of electricity transmission and distribution" (article 11 of the Energy Reform) (idem: 251).

<sup>&</sup>lt;sup>10</sup> The *ejidos* system is a form of rural communal land tenure typical of Mexico, created by the 1917 constitution.

The consequences of such a normative scenario affects Mexican indigenous people severely as they are far more likely to be in conditions of poverty than non-indigenous<sup>11</sup>: in 2016, 77.6% of indigenous people lived in multidimensional poverty and 34.8% in extreme multidimensional poverty [75], while for non-indigenous the rates were respectively 41% and 5.8% (*ibid.*). Similarly, their housing conditions are significantly poorer than those of non-indigenous people [76]. And lastly, 62% of them live in rural areas, compared to 23.2% of non-indigenous people [77], all of which represent relevant information. As a matter of fact, the assessment of energy poverty just mentioned above shows that the groups of households constituting respectively the "strong energy poverty" cluster and "extreme energy poverty" cluster, are located in rural areas [68]. Overall, this set of data leads us to infer that, first, Mexican indigenous people are more exposed to strong and extreme energy poverty than the rest of the population. Second, due to the fact that they live mostly in rural settings, they are also more exposed to the threats to collective ownership of the lands and commons posed by the energy reform.

These impacts are even more evident in Chiapas, which is the poorest state in the Mexican Federation. In 2018, 76.4% of its population lived in conditions of multidimensional poverty, with 29.7% in conditions of extreme multidimensional poverty [67]. And it is one of the states with the highest presence of indigenous groups with 27,9% (nearly 1,456 thousand people) [76]. In addition, the Energy Reform has further fueled the already huge interests of energy developments and extractivist initiatives targeting this state [78]. In 2015, Chiapas produced about 45% of all national electric hydropower [79]. And more hydroelectric power plants are to be realized in the next years, starting from the 240 MW-Chicoasén II [80]. Up to 2018, a total of 111 mining permits have been issued, corresponding to about

<sup>&</sup>lt;sup>11</sup> It should be noted that since 1895, the criterion Mexico has used to identify and count indigenous people has been the spoken language.

16% of Chiapas territory [81]. Finally, Chiapas is the third state in the Mexican federation in terms of crude oil production [82]. All these aspects informed the type of data to be collected in the ethnographic research as well as the themes for its subsequent analysis, as outlined in the following section.

#### 4. Materials and Methods

Between 2016 and 2019 U. Cao carried out an eighteen-months ethnographic research project about LyFdP as the core part of a joint PhD program in social and cultural anthropology at the University of Milano Bicocca and the École des Hautes Études en Sciences Sociales [42]. Prior to this study, LyFdP was completely absent from the relevant scientific literature. Information about the organization was very scarce in both local newspapers and on the Internet. This was the main reason for privileging ethnographic methods in order to collect first-hand, rich and thick information. Although the research concerned poor, peasant, indigenous and generally marginalized social groups, the researcher did not aim to merely give voice to the voiceless. He rather aspired to evoke these people's "experiential totality", following the approach of Wolf [83]. At the same time, he desired to avoid a quest for knowledge for its own sake, seeking instead to be more concerned with the lives of the subjects undergoing observation [84].

Using an "actor-oriented approach" [85], the study analyzed this social movement from three perspectives: a) motivations; b) political agenda; and c) forms and practices of resistance. Ethnographic activities were conducted in a number of villages, *ejidos*<sup>12</sup>, towns or neighborhoods, in the territories of the following municipalities across the state of Chiapas, where the presence of the organization is fairly strong: San Cristóbal de las Casas, San Juan Cancuc, San Andrés Larráinzar, Amatenango del Valle,

<sup>&</sup>lt;sup>12</sup> The *ejidos* system is a form of rural communal land tenure typical of Mexico, created by the 1917 constitution.

Venustiano Carranza, Oxchuc, Comitán de Dominguez, Frontera Comalapa, Chicomuselo, Siltepec, Las

Margaritas, Las Rosas, Ocosingo, Palenque and Salto de Agua.



Map. 1. Map of the major municipalities in Chiapas. Source: Mapas México

Participant observation was carried out in the daily life of activists, as well as in the following *events*<sup>13</sup>: seven internal assemblies of LyFdP (at community, regional and state level); five demonstrations, marches and public debates organized by LyFdP or by other allied social movements (e.g., EZLN); seven group visits to communities for solidarity, electricity or affiliation purposes; one clandestine workshop in order to train electricians among the activists of LyFdP.

Two sessions of "formal"<sup>14</sup>, face-to-face, semi-structured, open-ended and narrative-oriented interviews between Cao and individual activists were conducted, for a total of 12. Interviewees were selected according to their current or former roles of responsibility in the organization, their seniority

<sup>&</sup>lt;sup>13</sup> "Event" is used in anthropologist M. Gluckman's sense, i.e., a productive instance showing the processual nature of social life, and the agency of the people involved in it [87].

<sup>&</sup>lt;sup>14</sup> By "formal interviews" we mean face-to-face meetings between the interviewer and the interviewee, with the former asking specific questions and the latter providing answers.

in its ranks, their availability, and their ability to communicate in spoken Spanish. Five of the interviews were conducted with the founder of LyFdP, while the rest of the interviewees were different keyactivists within LyFdP. Interviewees were mainly asked about their backgrounds, their history of social activism in general and specifically within LyFdP. The questions were also aimed at collecting information about the experience and perceptions of LyFdP's activists, their analysis of the local and national contemporary reality, their ideological positions, the motivations behind their preference for LyFdP, their interpretation of the political goals being pursued, the question of electricity, human and economic relations within the organization, their views on strengths and weaknesses of the organization, and potential developments and outcomes of their struggle. Except for the interviews with the founder, all the others were audio-recorded, transcribed and analyzed in terms of both discourse and themes.

However, some of the most revealing and rich ethnographic information, also emerged from countless informal exchanges and conversations with the activists during their daily life and activities. Most of the topics included in the formal interviews were further explored during these informal occasions, where everyone was more at ease and spontaneous. Moreover, these exchanges allowed for regular follow-ups on specific contingent situations, facts or events, which were invaluable in understanding many aspects of LyFdP. Although these informal exchanges were not audio recorded, as many elements as possible were transcribed in the field notes. The analysis and interpretation of ethnographic data benefited from the valuable collaboration of some key research interlocutors, as the researcher sought to extend the polyphonic dimension of his work to the reading and interpretation of the ethnographic text [87]. For the purpose of this paper, we performed thematic analysis of the ethnographic data to illustrate four main aspects: the origins and development of LyFdP, its organizational structure and practices, the driving factors of activists' engagement and the political implications of their electricity resistance. With regard to the limitations of the study, interviews with state authorities were considered but ultimately rejected primarily due to the risk of jeopardizing the overall research project. There is indeed a record of political expulsions of foreigners allegedly involved in political activities in Chiapas [88]. An interview with the Mexican state-owned electric utility (CFE) was officially requested but has remained unanswered to date. As state authorities and the electric utility represent the most clearly identifiable "opponents" of LyFdP, the absence of their views constitutes a limitation of the research itself.

### 5. An "Energetic Resistance": The Ethnographic Case of Luz y Fuerza del Pueblo



5.1 Origins and Development of LyFdP

*Picture 1*. Protest of Luz y Fuerza del Pueblo in front of the headquarters of CFE – *Comisión Federal de Electricidad*. San Cristóbal de las Casas. November 2016. Source: Own.

Founded in 2004 in Chiapas, the civil resistance organization "Luz y Fuerza del Pueblo"<sup>15</sup> (People's Light and Power) is a social movement with a non-hierarchical structure. It has no leaders, only representatives who are elected by internal assemblies. These representatives, whose main role is to serve as spokespersons, remain in office for one year. LyFdP has an assembly-based management, organized according to the three levels of community, region and state. Its 2014 *Charter* – both a political manifesto and a compilation of guidelines and internal regulations – specifies that the organization is self-funded, independent from political parties and willing to fight for its goals in nonviolent ways through civil resistance [89].

The origins of LyFdP can be traced back to the loss of access to electricity, primarily due to affordability issues, by growing swaths of society at the beginning of the 2000s. Although Chiapas was already at that time among the poorest regions in the Americas [75,90], this situation was worsened by the progressive reduction in redistribution policies beginning in the early 1980s and an increase in electricity tariffs evident by the end of that decade [88]. The following quote is from an interview with Camilo, a 45-years-old activist from a Ch'ol village in the Municipality of Palenque:

It was at the end of the 1980s, beginning of the 1990s when many communities could not pay for electricity anymore. They started pleading for a tarifa justa [fair fee] or special fee of 5 pesos, while at that time were reported bills up to 1,000 pesos! The government met their demands to some extent. It launched social benefits programs such as "Tarifa Amiga" or "Chiapas Solidario". But these were only intended to distract people, to create a diversion. In this way, people forgot the demand for a fair fee. And when a new government came, everything went back as before and electricity rates rose again.

Since 1993, and especially from 1995 to 1997, the government provided several kinds of subsidies, such as fixed, "fair" fees, to support electricity access for all end-users [91]. This measure was, in fact, a direct response to the 1994 armed uprising of the *Ejercito Zapatista de Liberacion Nacional* (Zapatista Army

<sup>&</sup>lt;sup>15</sup> Contrary to what one might assume, the name is not a tribute to the dissolved electric utility "Luz y Fuerza del Centro". Rather, "Luz" refers to God's light, which should illuminate the path, pointing and guiding people. And "Fuerza" is the power of people who are organized and ready to struggle.

of National Liberation [EZLN]). As such, the policy aimed to limit further sympathies among the poorest social groups of Chiapas for the Zapatistas' struggle. However, as early as 1998, subsidies were lowered, and fees increased again (idem). In villages across Chiapas, the number of users who decided to stop paying for electricity grew quickly. They removed the meters from their residences, and directly and autonomously connected their houses to the grid. However, operating alone, unorganized and uncoordinated, they remained vulnerable to the reaction of the state-owned electricity company. In particular, they faced the risk of being cut off from the grid as well as other serious legal consequences. These fears were well-documented among the activists. Emiliano is an activist from the Los Altos region. In 2016, despite the fact that he was only 23, he was already serving as regional representative. As he put it:

If I am alone by myself, the Commission<sup>16</sup> can ruin me, but if we are already 4 or 5 people, then the Commission ponders before doing anything. And then, if 20 people from the Commission come, then I just bring over 40 compañeros! It's all about that: it's all about mutually defending ourselves.

As this quote shows, the creation of the organization was strongly motivated by the need for mutual defense and cooperation among the activists. But the emergence of this movement is not an isolated case in Chiapas. In fact, the state has a rich tradition of social mobilizations that started under the prompting of the first National Indigenous Congress, held in 1974 at the initiative of Bishop Samuel Ruiz García [92]. This event was a turning point in the recent history of Mexican indigenous peoples [88] because it served as a springboard for the proliferation of a galaxy of movements and organizations with different characteristics, goals, and political orientations. The 1994 armed uprising of the EZLN was the most groundbreaking result of this process that started 20 years earlier (idem). The creation of LyFdP draws from this remarkable tradition. In particular, it benefited from the increased awareness

<sup>&</sup>lt;sup>16</sup> The electricity company (CFE).

and the affiliation schemes established by different actors for EZLN. For example, Ernesto, the founder of LyFdP, worked for bishop Ruiz García during the 1980s and 1990s, when he was in charge of raising awareness and organizing groups of Catholic activists all over Chiapas to support the EZLN. This is how Ernesto recalled the genesis of LyFdP:

[...] Also after 1994, I continued to work in the communities and got more and more people to join EZLN. But then in many communities, around the beginning of the 2000s, people started to say to me: "Look, we want to resist, we want to struggle, we want to rebel too, but the EZLN is just not for us! It has many aspects that we are not comfortable with, that we don't agree with. Why don't you create something else? Another movement, capable of bringing us together and representing us?" That's how I started to build Luz y Fuerza.

Then the researcher asked: "And why electricity?" – To which, Ernesto replied: "Because that was the most urgent issue people were experiencing! It was the main need they had."

The groups were mobilized in a rather radical and systematic way. As mentioned above, activists removed the meters and plugged their houses directly into the grid<sup>17</sup>. At the same time, they began training their own electricians, thanks to the solidarity and competence of the Sindicado Mexicano Electricistas (SME) (Mexican Electrical Workers Union).



*Pictures 2 and 3*. The logo of Luz y Fuerza del Pueblo is painted on the house of a new activist, below the removed meter. Municipality of Ocosingo, March 2017. Source: Own.

<sup>&</sup>lt;sup>17</sup> The vast majority (over 95%) of end-users affiliated with LyFdP are households, not commercial or productive enterprises. The few retailers belonging to LyFdP run modest shops and cannot sell alcohol.

#### 5.2 LyFdP Organizational Structure and Practices

At the beginning of 2020, the organization counted over 80 thousand activists as members, across 15 regions and 75 municipalities of Chiapas. Between 85% and 90% of these members are peasants and indigenous people (most notably from the Tojolabal, Ch'ol, Mam, Tzotzil, Q'anjob'al and Chuj groups). Other members are mestizos - i.e. of mixed European and indigenous descent - who are either peasants or employed in low-paying wage jobs. Generally speaking, most members live in conditions of mild to extreme poverty. Nonetheless, LyFdP should be not defined as either a "peasant" or an "indigenous" movement because membership is not based on ethnicity or class. Each community bears the costs of training at least one technician among its members<sup>18</sup>. In return, the technicians provide free services to their own or other communities belonging to LyFdP whenever required.<sup>19</sup> Today, LyFdP counts about one thousand electricians among its ranks, at least one per community. They take care of any aspect related to the grid after electricity generation. Mainly because of poverty, the activists are not yet able to envision an off-grid future. Governmental institutions still manage the actual generation, which in Chiapas is primarily based on hydroelectric power plants. All this creates a remarkably interesting situation: while the high voltage infrastructure is overseen by the state, technicians of the movement have de facto autonomous control of the rest of the grid. They are able to perform interventions on the medium voltage cables and transformers, low voltage cables, and electrical wiring in public places as well as in individual dwellings. They self-produce the basic safety harnesses for operating on the grid as well as the electric light and transmission poles. The material cost of maintenance is covered through self-funding. Members are required to submit a symbolic membership fee (around 1-2 pesos/month, or 0.04-0.09 euros/month). In case of extraordinary expenses additional

<sup>&</sup>lt;sup>18</sup> These are primarily travel costs to reach the training venues, because SME workers do not charge anything for the training itself.

<sup>&</sup>lt;sup>19</sup> For a focus on the technicians of LyFdP and their techniques, see [94].

money is collected and a fund created in order to acquire the materials at reduced prices from sympathetic providers. Alternatively, activists may seize what is needed from the state-owned electric utility, CFE. However, this may happen only if the unauthorized presence of CFE's workers is discovered in any territory controlled by LyFdP.

For technical reasons, users are relatively safe from being disconnected from the electric grid. Remote unplugging is technically unavailable in most of Mexico, and the electric utility cannot – at least in Chiapas – unplug entire villages, towns or regions for not paying electric bills. This measure would create "holes" in what constitutes the woven textile of electrical wiring [94] and thus interrupt the flow of electricity running along the entire grid. In addition, insofar as the electric grid is physically heavy, costly and long-lasting [95], it would be materially and economically unaffordable to double or overlap existing infrastructure in order to isolate and bypass single nodes of the network. However, activists must perform constant surveillance over their territories to keep the Mexican electric utility and state authorities from unplugging individual users in the resistance.



*Picture 4.* A group of electricians of Luz y Fuerza del Pueblo after performing an intervention on the electrical grid. Zapaluta region, November 2019. Source: LyFdP.

#### 5.3. Driving Factors for LyFdP Activists

Among the most salient results of the ethnographic study are the extreme socio-economic precariousness and the consequent quest for "human security" [96]. These emerge as basic elements in motivating individuals to join local social movements. In addition, there is a "habitus" (following the formulation of Bourdieu, cf. [97]) for organized activism, which derives from the tradition of social movements in Chiapas mentioned earlier. Another powerful influence in this vein was the spread of Liberation Theology, introduced in the region and promoted by bishop Ruiz García. In sum, people tend to choose LyFdP because of: a) its inclusive and non-hierarchical forms of organization; b) its independence from any external funding and political actors; c) its anti-capitalistic positions; d) its preference for using non-violence and civil resistance; and e) its specific areas of action and intervention, that is electricity.

Indeed, electricity has functioned and still functions as the trigger for the social protests conducted by LyFdP. It constitutes the glue that unites the heterogeneous membership of this organization inasmuch as it is a concrete and urgent problem to be solved for many. Moreover, electricity "infuses governance" [98] because autonomous access to it and management of the grid demand, prompt, and promote territory control. This control is, once again, the fundamental pillar of any political autonomy [99]. Electricity therefore emerges for LyFdP as both a goal and a tool for the implementation of what Escobar calls "politics of place" [100].<sup>20</sup> The activists' own words express their specific understanding of electricity. For example, Emiliano explained:

As it is written in the Bible, God gave us the Earth, to take care of it, to cultivate it, to eat from it, to live from it. He didn't grant us the Earth to sell it and let others become rich with

<sup>&</sup>lt;sup>20</sup> "Politics of place" are emerging forms of politics bearing a new political imaginary that affirms a logic of difference (instead of a standard/universal logic) and the potentiality of a plurality of actors and actions in people's everyday lives [101]. They represent lucid responses to "empire politics" (ibid.). The latter assume that the "empire" can only be faced as such, in its totality, underestimating and discrediting localized actions. In this new framework, however, the more local alternatives to capitalist modernity expand their spaces of re/existence, the more they debilitate the "one-world project of empire" [102].

something that used to be ours. That's what Luz y Fuerza is all about: to defend the territory. Because we live from it. We used to call it Our Mother Earth [Nuestra Madre Tierra], because it is a mother that nourishes us. So, what else can we do but protect our Mother Earth, protect the territory?

In this quote, Emiliano makes an explicit reference to the orthodox Judeo-Christian directives derived

from Genesis (1:28), in which the divinity gifted humanity dominion over all creation. However, the role

of humans depicted in his words is more that of custodians of the creation, rather than masters or

stewards [102] as stated in the biblical verses. This role and the reference to Mother Earth are also

elements articulated in Liberation Theology [103]. At the same time, such understanding is interwoven

with the local indigenous system of thought, as explained by LyFdP's founder:

To understand our Resistance, there is one fundamental aspect you should consider. Our people are mainly indigenous, they are all sons of the ancient Mayas. The Mayan worldviews [cosmovisiones] play a crucial role in motivating indigenous people to join an organization like ours, and even in their way of being activists. In their worldview, there are four cardinal points, each of them corresponding to one of the four elements: Earth, Water, Fire, and Air. In the very center of these four points, there is the individual. However, he is not the owner of the world, nor its ruler! He is just a part of the world he belongs to, as any other component. From that position in the center, what he has to do is to stay in harmony with everything around him: with the environment, with the sky, with the wind, with God, with every side of Our Mother Earth...He has to keep and guarantee the harmony with this "whole".

In fact, also the Popol Vuh - the Mayan mythological book written in the K'iche' language -

recounts that the gods created the cosmos with the specific purpose of housing humanity [104]. In addition, they created Man<sup>21</sup> to serve them by taking care of the cosmos (ibid.). This means, first, that Man is at the center of the cosmic existence [105]; and second, that Man and nature are interdependent and reciprocally necessary, and they cannot be conceived as separate from each other (ibid.). More specifically, Mayan worldviews generally<sup>22</sup> regard territory as a coherent whole, where

<sup>&</sup>lt;sup>21</sup> It is specifically a male "Man" in the mythology.

<sup>&</sup>lt;sup>22</sup> Although we generalize here, we are of course aware of the cultural diversity within the various groups of the Mayan linguistic family, whose aspects mentioned above have varied over the centuries.

every component is a living subject (which means that it has a "spirit" or a "heart") that fulfils specific functions (idem: 295). This whole is sacred, because it is an expression of divine forces (ibid). Mayan worldviews are therefore a classic example of an ontology of "relational worlds" [101]. These are worlds "without objects" [106], where things and beings exist only in relation with each other [101], and they mutually depend on one another for their subsistence [106]. Common lands exist and play an important role in such relational worlds [101].

Indigenous activists of LyFdP often resorted to the expression "nuestras cosmovisiones" (our worldviews) whenever they wanted to illustrate or explain some aspects of their way of viewing reality, their way of living, or their way of being activists. They appealed to it to explain aspects of their existence they consider peculiar and directly related to their indigenous language and culture (and not, for instance, with being anti-capitalist, Catholic, social strugglers, etc.). For example, the "fajina" or "tequio", which is the collective community work typical of indigenous communities, was repeatedly mentioned to explain their attitude and their capacity for reciprocal cooperation and collective work in LyFdP. The combination of these spiritual, metaphysical and cultural references determines how the activists view electricity. In this sense, the kind of response they usually provided when (provocatively) questioned about the morality of their refusal to pay for electricity is revealing. When asked "And what about who pays for the electricity that you use?", a common response was, for instance:

Well...this question simply doesn't make sense to us. Where does electricity come from? From our rivers! From the water, the wind and other natural resources that our Mother Earth grants to all of us. They belong to all of us! Therefore, to someone asking this question, we reply: "You'd better stop paying electricity too and join our struggle against the misgovernment!"

Although this quote specifically reports how Camilo answered the question, it is representative of how activists usually motivate their views, and related claims, about electricity access.

[23]

5.4 Political Implications of the Electricity Resistance: LyFdP and Autonomy



*Picture 5*. Road sign informing that the territory you are crossing is "under the control of Luz y Fuerza del Pueblo". Municipality of Venustiano Carrranza, January 2017. Source: Own.

This form of "civil resistance via the grid" requires one fundamental condition: territory control.

Once activists achieve fairly effective control over their territory, they also try to prevent any other threat or unwanted presence or action on it, such as extraction of resources, environmental contamination, bio-piracy, drug smuggling, human trafficking and criminal activities in general. These include acts of abuse and violence from state authorities, the army, paramilitary groups and drug

cartels. The Charter of LyFdP states:

Our struggle is against high electricity fees, as well as for the defense of the earth, for the territory, for the right to water and to all natural resources. And to defend ourselves from the big transnational and national companies and from the Mexican misgovernment. We also struggle to fight alcoholism, drug addiction, criminality and everything affecting our society. [89]

In doing so, they aim to promote their political vision, seeking "solutions to their daily problems" [89] to build "a new society" (ibid.) according to a declaredly anti-capitalist ideology. What they have

achieved so far is a form of de facto political autonomy that can be defined as "interstitial" [42]. Therefore, they are neither seeking to take political power nor aiming to build autonomous political entities (as is the case for the Rebel Zapatista Autonomous Municipalities) or independent states. Instead, they carry out self-government practices in the interstices of Chiapas' socio-politics (ibid.). The empty spaces in which they implement their autonomous practices are primarily determined by: a) the systematic lack of rule of law characterizing Mexico [107]; b) the isolation and difficult accessibility of large territories in Chiapas combined with a relatively low population density; and c) the peripheral position of Chiapas in relation to the center of power (Mexico City).

LyFdP enforces its authority with non-violent yet determined actions. Members must participate in all activities and initiatives of the organization (internal assemblies, demonstrations, interventions on the grid, and so forth). Whoever contravenes the internal rules is fined and, in some cases, expelled. The organization does not oblige anyone to stop paying for electricity or to join its ranks. It is quite common that even in small villages, some neighborhoods adhere to LyFdP while others do not. Whenever tensions or conflicts arise between its activists and other civilians or social organizations, LyFdP always seeks diplomatic and peaceful solutions. Their main argument in support of this approach is that *el pueblo* must stay united and not become fragmented in facing the "common enemy", which is *el malgobierno* (i.e., misruling, corrupt government). Accordingly, they affirm that they will avoid paying for electricity until the Mexican government actually fulfills the 1996 San Andrés Peace Accords, which it has so far largely betrayed [108].

Finally, we illustrated above that the origins of LyFdP are linked to forms of civilian support for EZLN. It is relevant to mention here that many LyFdP activists stated that they had been part of the Zapatista support base members or militiamen. Most of them had left the EZLN due to "personal reasons". By that, they mostly meant that they were no longer comfortable with the strict military and

hierarchical management of EZLN. Nonetheless, they claimed to continue to respect and admire the Zapatista struggle. LyFdP itself subscribed to the 6<sup>th</sup> Declaration of the Selva Lacandona, which the EZLN proclaimed in June 2005. This means that although EZLN and LyFdP are independent from each other, they are allied and cooperate under specific circumstances. For instance, in October 2016 Cao witnessed LyFdP's activists from the Altos region going to support 24 Zapatista families from San Juan Cancuc, who were cut off from the electric grid due to internal community conflicts. After six months of diplomacy and planning, they were finally able to reconnect these families to the grid. The LyFdP activists did not charge a fee for their intervention. On the contrary, they even contributed some materials from their own common fund. They did so because – as the representative of the Altos region explained, *"the Zapatistas are* compañeros *too and we are fighting the same fight"*.

### 6. Discussion: Framing the "Human Right to Electricity Access"

Let us now briefly return to our twofold research question: Is it possible to ground a right to electricity access in a non-commodified view of nature? And, can the relational worldview exhibited by LyFdP provide an alternative foundation of such a right?

The findings described in the previous section suggest that the conception of electricity identified among the members of LyFdP is based on three interdependent theoretical foundations:

- A primordial, supernatural act of gift of Judeo-Christian origin mediated by Liberation Theology: electricity comes from natural resources that the divinity gifted humanity to live from and to care for.
- 2. A relational ontology dependent on Mayan *cosmovisiones*: being part of the "living whole", natural resources are communal. No one can ever be denied access to them for subsistence. Furthermore, humanity has to protect the cosmos with a role of custodian.

3. A non-commodified view of nature, whose origins are twofold: the Mayan worldviews on one side, and anti-capitalist ideology on the other. More specifically, the activists oppose the exploitation of natural resources when it is aimed at the accumulation of capital, and not for the purpose of subsistence. Therefore, they reject any conception of electricity as a "commodity", "good" or "service" that is subject to market laws, which they ascribe to the commercial approach of CFE.

For these reasons, LyFdP's activists claim that electricity must be considered a basic human right, the access to which should be universal and non-discriminatory. While other efforts to theorize a right to energy stress the benefits of energy services for users or customers, this case study shows that for LyFdP's activists electricity does not just have socio-economic value (of which they are well aware), but rather is part of a broader and deeper understanding of the world and the place humans should have in it. In our view, these three interdependent theoretical foundations can plausibly motivate a normative claim for a human right to electricity access. Given the ethnographic results, analytical approaches based only on class or socioeconomic conditions would not suffice to picture the complexity of the reality observed. Yet, it should also be clarified that we are careful about not to fall into cultural reductionism while interpreting LyFdP's struggle. We reiterate that the reasons for its creation and what activists advocate for are deeply rooted in the conditions of "structural violence" [109] they experience.

#### 8. Conclusion

This study sits at the crossroads of two emerging fields, anthropology of energy and normative energy ethics. It contributes to another recent intellectual development, that is the endeavor to theorize and implement energy rights. Two interrelated literature reviews provided context and helped frame the

structure of the article. First, we presented various attempts to define a right to energy. After evaluating possible alternatives, we decided to adopt the specific formulation "human right to electricity access." Next, we surveyed examples of scholarly work in the anthropology of energy that studied local and indigenous resistance movements to energy projects, showing that several peculiarities make LyFdP a unique case in the anthropology of electricity. The main findings of the ethnographic study suggest that it is possible to theorize a human right to electricity access from the perspective of social groups, experiences, and worldviews from the Global South. The approach to electricity rights of the activists of LyFdP appears in contrast to a top-down theory of rights. From a theoretical perspective, it is possible to further qualify the type of energy right they claim. According to our findings, this would be a human claim-right, a socio-economic right [52] as well as an intragenerational and intergenerational right [110]. Moreover, their conceptualization of electricity blurs the lines between other characteristics of rights that are considered mutually exclusive in classical rights theory. For example, this right to electricity access has both individual and community importance. It is both a passive and an active right, in the sense that the activists do not consider themselves only the bearers of such right but have also a proactive role in providing themselves access to electricity. Finally, it may be described as both a positive and a negative right. Indeed, the holders of such right would be entitled at the same time to the provision of electricity but also to their autonomy, that is to non-interference [111]. Overall, our proposal may be a blueprint that may not only benefit intellectual efforts to theorize and implement energy rights in a legal setting, but also support the concrete claims of other rural, poor, and indigenous groups whose living conditions and characteristics are similar to those of LyFdP. The study, reflections and proposal herein may also be stimulating for anyone who is eager to explore, define, implement and enforce energy rights in more pluralistic and inclusive ways.

Furthermore, this case study may bear some practical considerations. Gupta wrote that as social

scientists, we know "almost nothing" about what users in the global South are doing with energy [112]. In this sense, LyFdP opens up a revealing insight on what populations in deep poverty are capable to do in order to access electricity. It proves that when political institutions do not guarantee real policies and ensure effective, affordable and sufficient access to electricity, the poor may "do it themselves". They aspire - in Appadurai's sense - [113], they organize themselves, acquire skills and take action. And they are able to do all this often in a very systematic and effective way. But there is more. Boyer argued that the grid helps "to groove political efficacy, subjectivity, and affiliation" [98] and that overall, electropolitics infuse governance. LyFdP shows that the governance spread across the grid has not necessarily to be central state's governance: it could also be a popular autonomous governance, from below. Finally, the lived experience of LyFdP suggests that the recognition of a human right to electricity access could be considered at the same time an end in itself a means within a broader struggle. As an end, it would guarantee the useful and necessary services provided by electricity access. As a means, it affirms a vision of energy and the world radically different from that endorsed by capitalistic modernity

[114].

# References

- [1] K. Araújo, The Emerging Field of Energy Transitions: Progress, Challenges, and Opportunities, Energy Res.
- Soc. Sci. 1 (2014) 112–121. https://doi.org/10.1016/j.erss.2014.03.002.
- [2] F.W. Geels, B.K. Sovacool, T. Schwanen, S. Sorrell, Sociotechnical Transitions for Deep Decarbonization,
- Science. 357 (2017) 1242–1244. https://doi.org/10.1126/science.aao3760.
- [3] C. Büscher, J. Schippl, P. Sumpf, eds., Energy as a Sociotechnical Problem: An Interdisciplinary Perspective on Control, Change, and Action in Energy Transitions, Routledge, New York, 2019.
- [4] P.C. Stern, B.K. Sovacool, T. Dietz, Towards a Science of Climate and Energy Choices, Nat. Clim. Change. 6 (2016) 547–555. https://doi.org/10.1038/nclimate3027.
- [5] S. Jasanoff, Just Transitions: A Humble Approach to Global Energy Futures, Energy Res. Soc. Sci. 35 (2017) 11–14. https://doi.org/10.1016/j.erss.2017.11.025.
- [6] R.J. Heffron, D. McCauley, What is the 'Just Transition'?, Geoforum. 88 (2018) 74–77.
- https://doi.org/10.1016/j.geoforum.2017.11.016.
- [7] UN, Declaration on the Right to Development, United Nations, New York, 1986.
- [8] UN, Agenda 21: Programme of Action for Sustainable Development, Rio Declaration, Forest Principles, Rio de Janeiro, 1992. http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf.
- [9] UN, The Future We Want: Outcome Document adopted at Rio+20 Conference on Sustainable Development, in: U. N. Dep. Econ. Soc. Aff., UN, Rio de Janeiro, 2012.

[10] UN, The Millennium Development Goals Report 2015, United Nations, New York, 2015.

[11] UN, The Sustainable Development Goals Report 2016, United Nations, New York, 2016.

[12] UNDP, Human Development Indices and Indicators 2018 Statistical Update, United Nations Development Programme, New York, 2018.

[13] M. Hesselman, A. Varo, S. Laakso, The Right to Energy in the European Union, 2019.

[14] M. Bazilian, R. Pielke, Making Energy Access Meaningful, Issues Sci. Technol. 29 (2013) 74–78.

[15] M. Bazilian, P. Nussbaumer, C. Eibs-Singer, A. Brew-Hammond, V. Modi, B. Sovacool, V. Ramana, P.-K. Aqrawi, Improving Access to Modern Energy Services: Insights from Case Studies, Electr. J. 25 (2012) 93–114. https://doi.org/10.1016/j.tej.2012.01.007.

[16] O. Golubchikov, K. O'Sullivan, Energy periphery: Uneven development and the precarious geographies of low-carbon transition, Energy Build. 211 (2020) 109818. https://doi.org/10.1016/j.enbuild.2020.109818.

[17] UNDP, OPHI, Global Multidimensional Poverty Index 2019: Illuminating Inequalities, New York, 2019.

[18] S. Alkire, J.E. (James E. Foster, S. Seth, M.E. Santos, J.M. Roche, P. Ballón, Multidimensional Poverty Measurement and Analysis, First edition, Oxford University Press, New York, NY, 2015.

[19] P. Nussbaumer, F. Nerini, I. Onyeji, M. Howells, Global Insights Based on the Multidimensional Energy Poverty Index (MEPI), Sustainability. 5 (2013) 2060–2076. https://doi.org/10.3390/su5052060.

[20] I. Arto, I. Capellán-Pérez, R. Lago, G. Bueno, R. Bermejo, The Energy Requirements of a Developed World, Energy Sustain. Dev. 33 (2016) 1–13. https://doi.org/10.1016/j.esd.2016.04.001.

[21] G. Kalt, D. Wiedenhofer, C. Görg, H. Haberl, Conceptualizing energy services: A review of energy and wellbeing along the Energy Service Cascade, Energy Res. Soc. Sci. 53 (2019) 47–58.

https://doi.org/10.1016/j.erss.2019.02.026.

[22] A.D. Pasternak, Global Energy Futures and Human Development: A Framework for Analysis, US Department of Energy, Livermore, 2000.

[23] D.M. Martínez, B.W. Ebenhack, Understanding the Role of Energy Consumption in Human Development Through the Use of Saturation Phenomena, Energy Policy. 36 (2008) 1430–1435.

https://doi.org/10.1016/j.enpol.2007.12.016.

[24] F. Bartiaux, M. Maretti, A. Cartone, P. Biermann, V. Krasteva, Sustainable energy transitions and social inequalities in energy access: A relational comparison of capabilities in three European countries, Glob. Transit. 1 (2019) 226–240. https://doi.org/10.1016/j.glt.2019.11.002.

[25] G. Frigo, M. Baumann, R. Hillerbrand, Energy and the Good Life: The Right to Energy Access and the Capabilities Approach, J. Hum. Dev. Capab. 22 (2021). https://doi.org/10.1080/19452829.2021.1887109.

[26] E. Shove, G. Walker, What Is Energy For? Social Practice and Energy Demand, Theory Cult. Soc. 31 (2014) 41–58. https://doi.org/10.1177/0263276414536746.

[27] D. Boyer, Energopower: An Introduction, Anthropol. Q. 87 (2014) 309–333.

[28] D. Boyer, Energopolitics and the Anthropology of Energy, Anthropol. News. 52 (2011) 5–7.

https://doi.org/10.1111/j.1556-3502.2011.52505.x.

[29] I. Szeman, Conclusion: On Energopolitics, Anthropol. Q. 87 (2014) 453–464.

https://doi.org/10.1353/anq.2014.0019.

[30] J. Richter, Energopolitics and nuclear waste: Containing the threat of radioactivity, Energy Res. Soc. Sci. 30 (2017) 61–70. https://doi.org/10.1016/j.erss.2017.06.019.

[31] T. Mitchell, Carbon Democracy: Political Power in the Age of Oil, Verso, London, 2011.

[32] D. McCauley, R.J. Heffron, S. Hannes, K. Jenkins, Advancing Energy Justice: the Triumvirate of Tenets, Int. Energy Law Rev. 32 (2013) 107–110.

[33] I. Szeman, D. Boyer, Introduction: On the Energy Humanities, in: Energy Humanit. Anthol., Johns Hopkins University Press, Baltimore, 2017: pp. 10–19.

[34] I. Szeman, D. Boyer, Energy Humanities: an Anthology, Johns Hopkins University Press, Baltimore, 2017.

[35] S. Strauss, S. Rupp, T. Love, Cultures of Energy. Power, Practices, Technologies, Left Coast Press, Walnut Creek, CA, 2013.

[36] J. Smith, M.M. High, Exploring the Anthropology of Energy: Ethnography, Energy and Ethics, Energy Res. Soc. Sci. 30 (2017) 1–6. https://doi.org/10.1016/j.erss.2017.06.027.

[37] M.M. High, J.M. Smith, Introduction: The Ethical Constitution of Energy Dilemmas, J. R. Anthropol. Inst. (2019). https://doi.org/10.1111/1467-9655.13012.

[38] C. Miller, The Ethics of Energy Transitions, in: 2014 IEEE Int. Symp. Ethics Sci. Technol. Eng., IEEE Press, Chicago, IL, USA, 2014. https://doi.org/10.1109/ETHICS.2014.6893445.

[39] G. Frigo, Energy Ethics: Emerging Perspectives in a Time of Transition, Relat. Anthr. 6 (2018) 7–30.

[40] G. Frigo, The Energy Ethics and Strong Sustainability: Outlining Key Principles for A Moral Compass, in: K.J. Bonnedahl, H. Pasi (Eds.), Strongly Sustain. Soc., Routledge, London - New York, 2018: pp. 77–95.

[41] J. Bethem, G. Frigo, S. Biswas, T. DesRoches, M.J. Pasqualetti, Energy Decisions within an Applied Ethics Framework: Analysis of Five Recent Controversies, Energy Sustain. Soc. 10 (2020) 1–6.

[42] U. Cao, Fighting For and Fighting Through Electricity. An Ethnography of the Civil Resistance Movement "Luz y Fuerza del Pueblo", from Chiapas, Mexico., University of Milano Bicocca and Ecole des Hautes Etudes en Sciences Sociales, 2019.

[43] R. Day, G. Walker, N. Simcock, Conceptualising Energy Use and Energy Poverty Using a Capabilities Framework, Energy Policy. 93 (2016) 255–264. https://doi.org/10.1016/j.enpol.2016.03.019.

[44] P. Velasco-Herrejon, T. Bauwens, Energy justice from the bottom up: A capability approach to community acceptance of wind energy in Mexico, Energy Res. Soc. Sci. 70 (2020) 101711.

https://doi.org/10.1016/j.erss.2020.101711.

[45] K.E.H. Jenkins, J.C. Stephens, T.G. Reames, D. Hernández, Towards Impactful Energy Justice Research: Transforming the Power of Academic Engagement, Energy Res. Soc. Sci. 67 (2020) 101510. https://doi.org/10.1016/j.erss.2020.101510.

[46] F. Sultana, A. Loftus, The Human Right to Water: Critiques and Condition of Possibility: Human right to water, Wiley Interdiscip. Rev. Water. 2 (2015) 97–105. https://doi.org/10.1002/wat2.1067.

[47] UN, Resolution 64/292 "The Human Right to Water and Sanitation," (2010).

[48] S. Tully, Access to Electricity as a Human Right, Neth. Q. Hum. Rights. 24 (2006) 557–587.

https://doi.org/10.1177/016934410602400402.

[49] S. Tully, The Human Right to Access Clean Energy, J. Eng. Sustain. Dev. Energy Environ. Health. 2 (2008) 140– 148.

[50] B. Freling, Energy is a Human Right, Bob Frelings Sol. Blog. (2012).

http://www.bobfreling.com/2012/01/energy-is-a-human-right-the-hi.htm (accessed April 11, 2020).

[51] G. Walker, Inequality, Sustainability and Capability: Locating Justice in Social Practice, in: E. Shove, N. Spurling (Eds.), Sustain. Pract. Soc. Theory Clim. Change, Routledge, London, 2013.

[52] G. Walker, The Right to Energy: Meaning, Specification and the Politics of Definition, Eur. En Form. 378 (2015) 26. https://doi.org/10.3917/eufor.378.0026.

[53] M. Hesselman, Energy Poverty and Household Access to Energy Services in International, Regional and National Law, Encycl. Energy Law Environ. (2020).

[54] P. Jones, Rights, Macmillan Education UK, London, 1994. https://doi.org/10.1007/978-1-349-23671-8.

[55] J.-A. McNeish, A. Borchgrevink, O. Logan, eds., Contested Powers. The Politics of Energy and Development in Latin America., Zed Books, London, 2015.

[56] D. McAdam, H. Boudet, Putting Social Movements in their Place Explaining Opposition to Energy Projects in the United States, 2000–2005., Cambridge University Press, 2012.

[57] S. Smith, B. Frehner (Eds.), Indians and Energy: Exploitation and Opportunity in the American Southwest, School for Advanced Research Press, Santa Fe, NM, 2010.

[58] C. Howe, D. Boyer, E. Barrera, Wind at the margins of the state: autonomy and renewable energy development in southern Mexico., in: McNeish J- Borchgrevink O Logan Eds Contested Powers Polit. Energy Dev. Lat. Am., Zed Books, London, 2015.

[59] E. Zárate-Toledo, B. Patiño, G. Fraga, Justice, social exclusion and indigenous opposition: A case study of wind T energy development on the Isthmus of Tehuantepec, Mexico., Energy Res. Soc. Sci. 54 (2019) 1–11. https://doi.org/10.1016/j.erss.2019.03.004.

[60] A. Dunlap, Counterinsurgency for wind energy: the Bíi Hioxo wind park in Juchitán, Mexico, J. Peasant Stud. 45 (2018) 630–652. https://doi.org/10.1080/03066150.2016.1259221.

[61] G.A. Collier, The Rebellion in Chiapas and the Legacy of Energy Development, Mex. Stud. Mex. 10 (1994) 371–382. https://doi.org/10.2307/1051902.

[62] J. Nash, Defying Deterritorialization: Autonomy Movements against Globalization, in: Nash J Ed 2005 Soc. Mov. Anthropol. Read., Blackwell Publishing, 2005: pp. 177–186. [63] P. Farmer, Pathologies of power. Health, human rights and the new war on the poor., Berkeley: University of California Press., 2003.

[64] T.F. Homer-Dixon, Environment, Scarcity, and Violence., Princeton University Press, Princeton, 1999.

[65] Cámara de Diputados del H. Congreso de la Unión, Constitución Política de los Estados Unidos Mexicanos. (Última Reforma DOF 24-12-2020)., (2020). http://www.diputados.gob.mx/LeyesBiblio/pdf/1\_241220.pdf (accessed February 6, 2021).

[66] Cámara de Diputados del H. Congreso de la Unión, Ley de Vivienda. (Última reforma publicada DOF 14-05-2019)., (2019). http://www.diputados.gob.mx/LeyesBiblio/pdf/LViv\_140519.pdf (accessed February 20, 2020).

[67] CONEVAL, 10 anos de medición de pobreza en México, avances y retos en política social., (2019). https://www.coneval.org.mx/SalaPrensa/Comunicadosprensa/Documents/2019/COMUNICADO\_10\_MEDICION\_PO BREZA 2008 2018.pdf (accessed February 8, 2020).

[68] R. García Ochoa, B. Graizbord Ed, Privation of energy services in Mexican households: An alternative measure of energy poverty., Energy Res. Soc. Sci. 18 (2016) 36–49. https://doi.org/10.1016/j.erss.2016.04.014.
[69] R. Gutiérrez Rodríguez, Los límites de la política social durante el sexenio de Peña Nieto., ECONOMÍAunam. 13 (2016).

[70] M. Miranda Olivo, Empresas productivas del Estado, análisis de su régimen jurídico y comparativo con las sociedades anónimas-, Amic. Curiae. 1 (2015) 70–99.

[71] P. De Llano, La izquierda mexicana marcha en contra de la reforma energética., El País. (2013).

https://elpais.com/internacional/2013/09/01/actualidad/1377989674\_770060.html (accessed February 20, 2020).

[72] E. Núñez Terrones, A. Biancheto, N. Ávila Delgado, Territorio, despojo y fracking. La reforma energética mexicana., Ciudades. 117 (2018).

[73] R. Vargas Suárez, Reforma energética. De servicio público a modelo de negocio., Política Cult. 43 (2015).

[74] D. Harvey, The New Imperialism., Oxford University Press, 2003.

[75] CONEVAL, Medición de la pobreza en México y en las Entidades Federativas 2016., (2017).

http://www.coneval.org.mx/Medicion/MP/Documents/Pobreza\_16/Pobreza\_2016\_CONEVAL.pdf (accessed October 10, 2017).

[76] - Instituto Nacional de Estadística y Geografía INEGI, Estadísticas a propósito del.. Día Internacional de los Pueblos Indígenas (9 de Agosto). Datos nacionales., 2016.

https://www.inegi.org.mx/contenidos/saladeprensa/aproposito/2016/indigenas2016\_0.doc. (accessed February 18, 2021).

[77] C. de E. para el D.R.S. y la S.A. CEDRSSAR, La población indígena en el México rural: situación actual y perspectivas, 2015.

http://www.cedrssa.gob.mx/files/b/13/17Reporte%2023%20Población%20ind%C3%ADgena%20en%20el%20medio %20rural.pdf (accessed February 18, 2021).

[78] D. Villafuerte Solís, Transformaciones socioeconómicas y neo-extractivismo en Chiapas., Argumentos. 28 (2015) 191–213.

[79] O. de I. de S.Energetico. OISE, Generación de Energía Hidroeléctrica por estado 2015, (2020). http://www.oise.mx/hidraulica (accessed February 20, 2020).

[80] Hydro Review Content Directors, Mexico to move forward on 240-MW Chicoasén II hydro project, not others., (2021). https://www.hydroreview.com/hydro-industry-news/mexico-to-move-forward-on-240-mw-chicoasen-ii-hydro-project-not-others/ (accessed February 6, 2021).

[81] Servicio Geológico Mexicano, Panorama Minero del Estado de Chiapas. Diciembre 2018., (2018). http://www.sgm.gob.mx/pdfs/CHIAPAS.pdf (accessed February 6, 2021).

[82] [dataset] Sistema de Información Energética (SIE), Información Estadística. Sector Energético., (2021).

http://sie.energia.gob.mx/bdiController.do?action=temas (accessed February 10, 2021).

[83] E.R. Wolf, Pathways of power: building an anthropology of the modern world., University of California Press, Berkeley and Los Angeles, California, 2001.

[84] R. Cardoso de Oliveira, Caminhos da identidade: ensaios sobre etnicidade e multiculturalismo., UNESP, 2006.

[85] T. Salman, W. Assies, Anthropology and the Study of Social Movements., in: Roggeband C B Klandermans Eds Handb. Soc. Mov. Discip., Springer International Publishing, 2017: pp. 57–101.

[86] M. Gluckman, Analysis of a social situation in modern Zululand., Bantu Stud. 14 (1940) 1–30.

[87] L.E. Lassiter, From "reading over the shoulders of the natives" to "reading alongside natives" literally: towards a collaborative and reciprocal ethnography., J. Anthropol. Res. 57 (2001) 137–149.

[88] J. Nash, Maya Visions: The Quest for Autonomy in an Age of Globalization, Routledge, New York, 2001.

[89] Luz y Fuerza del Pueblo, Reglamento interno para el funcionamiento de la Organización de la Resistencia Civil "Luz y Fuerza del Pueblo" adherentes de la Sexta 2014. (Confidential document), (2014).

[90] P. Farmer, Chapter 3. Lessons from Chiapas., in: Farmer P Pathol. Power Health Hum. Rights New War Poor, Berkeley: University of California Press., 2003: pp. 91–114.

[91] J.L. Escobar Delgadillo, J.S. Jiménez Rivera, Crisis económica, crisis energética y libre mercado.,

Revista.Unam.Mx. 10 (2009). http://www.revista.unam.mx/vol.10/num5/art29/int29.htm (accessed May 16, 2018).
[92] A. Gilly, Chiapas: la ribellione del mondo incantato., Manifestolibri, 1999.

[93] U. Cao, Résistances électriques. Le mouvement "Luz y Fuerza del Pueblo" au Chiapas (Mexique)., Tech. Cult. 74 (2020).

[94] M. Anusas, T. Ingold, The Charge Against Electricity., Cult. Anthropol. 30 (2015) 540–554.

[95] T. Winther, H. Wilhite, Tentacles of Modernity: Why Electricity Needs Anthropology, Cult. Anthropol. 30 (2015) 569–577. https://doi.org/10.14506/ca30.4.05.

[96] - United Nations General Assembly UNGA, UN General Assembly. 66th Session. Follow-up to paragraph 143 on human security of the 2005 World Summit Outcome" (A/RES/66/290), 25 October 2012., 2012.

https://www.unocha.org/sites/dms/HSU/Publications%20and%20Products/GA%20Resolutions%20and%20Debate% 20Summaries/GA%20Resolutions.pdf (accessed June 30, 2018).

[97] P. Bourdieu, Esquisse d'une Théorie de la Pratique Précédé de Trois Études d'Ethnologie Kabyle., Seuil, Paris, 2015.

[98] D. Boyer, Anthropology Electric, Cult. Anthropol. 30 (2015) 531–539. https://doi.org/10.14506/ca30.4.02.
[99] R. Zibechi, La autonomía es más que una palabra., (2004).

http://www.rebelion.org/hemeroteca/sociales/040119zibechi.htm (accessed February 8, 2020).

[100] A. Escobar, Una minga para el postdesarrollo: lugar, medio ambiente y movimientos sociales en las transformaciones globales, Programa Democracia y Transformación Global Universidad Nacional Mayor de San Marcos. Facultad de Ciencias Sociales, Lima, 2010.

[101] A. Escobar, Sentipensar con la Tierra: Las Luchas Territoriales y la Dimensión Ontológica de las Epistemologías del Sur., Rev. Antropol. Iberoam. 11 (2016) 11–32.

[102] R. Rozzi, F.S. Chapin III, J.B. Callicott, S. Pickett, M. Power, J. Armesto, R. May Jr, eds., Earth Stewardship: Linking Ecology and Ethics in Theory and Practice, Springer, Cham, 2015. https://doi.org/10.1007/978-3-319-12133-8.

[103] L. Boff, Una ética de la Madre Tierra: Cómo cuidar la Casa Común., Editorial Trotta, S.A., 2017.

[104] M. De la Garza Camino, El hombre en el pensamiento religioso náhuatl y maya., UNAM, Mexico, 1978.

[105] M.A. Morales Damián, Territorio sagrado: cuerpo humano y naturaleza en el pensamiento maya., Cuicuilco. 48 (2010).

[106] T. Ingold, Being Alive. Essays on Movement, Knowledge, and Description., Routledge, New York, 2011.

[107] W.J.P. WJP, World Justice Project. Rule of Law Index. 2020., 2020.

https://worldjusticeproject.org/sites/default/files/documents/WJP-ROLI-2020-Online\_0.pdf (accessed October 1, 2020).

[108] Y. Le Bot, La gran revuelta indígena., Universidad Iberoamericana Puebla, 2013.

[109] P. Farmer, An Anthropology of Structural Violence., Curr. Anthropol. 45 (2004) 305–325.

[110] B.K. Sovacool, M. Burke, L. Baker, C.K. Kotikalapudi, H. Wlokas, New Frontiers and Conceptual Frameworks for Energy Justice, Energy Policy. 105 (2017) 677–691. https://doi.org/10.1016/j.enpol.2017.03.005.

[111] L. Wenar, Rights, Stanf. Encycl. Philos. (2020).

[112] A. Gupta, An Anthropology of Electricity from the Global South, Cult. Anthropol. 30 (2015) 555–568.

[113] A. Appadurai, The Capacity to Aspire: Culture and the Terms of Recognition., in: Rao V Walt. M Eds Cult. Public Action, Stanford University Press, Palo Alto, California, 2004.

[114] A.E. Ceceña, Autonomía y control de los territorios en América Latina., in: Gasparello G Quintana Guerr. J Eds Otras Geogr. Exp. Auton. Indígenas En México, Redez tejiendo la utopía., 2010: pp. 195–212.