Space and Relationships between Rural Communities and Extractive Industry in Sodom Square, Israel

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Non-agricultural geographical entities become increasingly prevalent in rural spaces. In certain areas these entities include extractive industries. Their relationships with the local communities can shape the nature of this space. As the relationality paradigm provides a conceptual framework for understanding space, we employ some of its notions in understanding this space through these relationships. We examine the evolution of relationships between Dead Sea Works and Sodom Square communities in Israel over time as a vehicle for understanding changes in the nature of rural space. The qualitative methodology analyses five-year minutes of a forum established between these entities and interviews with community members and corporate senior officials. The analysis reveals stages in the evolution of relationships in this space from alienation to friction and negotiation and then to cooperation. Accordingly, the nature of space has transformed from stressfully prescriptive to willfully-negotiative and then to trustfully-collaborative. This study carries specific implications for understanding the nature of space produced by the relationships between rural communities and extractive industries, and more generally to analyzing the role of community-industry relationships in shaping metropolitan spaces.

Keywords: *geographical entities, rural community, industry, relationality, relationships, nature of space, Dead Sea.*

Rural communities are increasingly compelled to encounter geographical entities whose land-uses are non-agricultural. Quite often these entities are excluded as nimbies from core urban areas and pushed into these remote marginal rural environments. Due to raw material depletion elsewhere, mining enterprises have been attracted increasingly to remote desolate rural habitats in extreme ecosystems such as arid zones. An encounter between the two types of geographical entities—the rural community and the industrial compound—begins to form and relationships

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are inescapable. On the one hand, quite commonly the powerful industrial compound operates in complete disregard of its impact on its neighbors' health and well-being, as well as on the surrounding natural environment. On the other hand, the small rural community is compelled to struggle not only with remoteness and harsh, natural-ecological conditions but with an industrial environment that generates hazardous disturbances to its human and natural surroundings.

We argue that an industrial compound, by virtue of being a geographical entity, is also a place and not just a bounded territory loaded with technological facilities. Hence, its very existence produces relationships with other places and communities in the same territory. These relationships call in the relationality paradigm which suggests that they can contribute to producing space despite structural forces such as corporate economics or governmental conduct. Yet, we further suggest that where power relationships between geographical entities sharing a territory exist, such as between neighboring industry and community, they are not necessarily static, rather they are transformable, a process which too can shape the nature of space.

Such is the case of Sodom Square in the Dead Sea area in Israel with two rural communities and Dead Sea Works (DSW). The case of this arid remote region is however unique in that these communities were established in the 1970s next to an already existing chemical-mineral industrial compound, contrary to the more common opposite reality. Since establishment, they have been living in the shadow of one of the worlds' largest potash and bromide producers. Despite economic independence of the entities from each other, a spatial-ecological problematic setting gradually developed due to the unique governance conditions of the industrial compound, with village communities left to their own devices by government agencies. In the early 2000s an NGO entered this vacuum and initiated a joint forum for improving the extremely unbalanced power relationships.

In the current paper we wish to examine this rural case of spatio-ecological relationships and the nature of space produced between these geographical entities. Our main purpose is to fill-in a lacuna in the political ecology literature on environmental conflicts which rarely deals with these types of cases. We begin by describing an industrial compound as a geographical entity and deploying the conceptual infrastructure of relationships between geographical entities revolving around environmentally problematic conditions of extractive industries in rural regions. This is then enveloped by a more theoretical framework of the relationality paradigm and particularly those notions that pertain to the nature of space produced by relationships between geographical entities. Following this is a brief account of DSW and Sodom Square communities, the nature of conflict between them, and the NGO that became involved through the forum. We then describe our qualitative methodology of studying these spatial relationships based on data from minutes of the forum sessions and interviews with its participants. Following an analysis of our findings we discuss their insights and implications for understanding relationships between such entities revolving around environmental issues and the spaces of ex-

tractive industries produced in rural areas. In the conclusion we raise the possible applicability of these notions to spaces of relationships between similar geographical entities more generally including metropolitan areas.

RELATIONSHIPS IN SPACE AND ENVIRONMENTAL CONFLICTS

Understanding relationships in space requires first accepting that they take place among entities. The Cambridge Dictionary defines an entity as something that exists apart from other things. In the present context we are concerned with geographical entities, whereby formal settlements are the most common ones in that they exist apart from each other. However, other entities also dwell in space with similar attributes to those of settlements that is, they have a population of a certain size albeit quasi-permanent and non-resident, usually worker and non-worker population, complete with physical structures and infrastructures. They occupy a legally delimited territory within which a certain degree of internal institutional governance, rules of conduct and quasi-policing/security are practiced, some even resembling gated communities. Such are university/college and hospital campuses, industrial parks and military camps, each with an impact on its human and biophysical environments (Meir, 2008). They may be located solely within dense urban territories but increasingly also in sparse rural spaces. By virtue of these properties, such a geographical entity may be considered a place. Its very existence generates an impact which suggests an on-going encounter and effects embodied in relationships with neighboring formal settlements or neighborhoods.

Such are extractive enterprises that, as geographical entities, can generate relationships with other entities. They constitute a demarcated large compound in both area and worker population complete with extensive installations structures and multiple infrastructures which extend beyond their demarcated limits, exerting pressures on the bio-physical and human environments. Their location is pre-destined into specific territories where raw materials can be exploited. They are often located near rural communities which have been using the land for commercial or subsistence agriculture for extensive periods of time, some even indigenous to their territory (Hilson, 2002). Hence, these industrial entities are channeled by necessity into an encounter with the local communities. As shown by Paredes (2016), due to depletion of early-extracted territories and/or development of new extracting technologies, the nature of these entities quite often requires permanent territorial expansion ever closer to the neighboring communities. This entails greater environmental and social impacts, and therefore intensification of the encounter and possible friction within the shared territory.

The conflictual issues around which the relationships commonly revolve include control of natural resources, territorial sovereignty, environmental impacts, economic development and resource rents (Le Billon, 2005; Perreault, 2008; Schilling-

Vacaflor, 2013; Kirsch, 2014; Gilberthorpe and Papyrakis, 2015; Helweg, 2014). Currently such disputes are more locally cast within relationships between fragmented local communities and mining enterprises. They are manifested through local mobilization campaigns and grass root movements, what Paredes calls 'the glocalization of mining conflicts' (2016). One dimension of these relationships is the role of government. Due to a significant contribution to national economy, governments tend to side almost exclusively with the mining enterprises at the expense of local communities (Hilson, 2002; Triscritti, 2013; Moomen and Dewan, 2015). Such deficient government leaves local communities to cope alone with the neighboring entity.

However, relationships are not exclusively conflictual. Due to the fragmentation and glocalization of relationships, local communities may perhaps opt to engage with a more constructive and mutually beneficial encounter with the mining enterprise. Thus, rather than the common NIMBY-based relationships, grounded in hazardous environmental and social impacts, there are cases of PIMBY ('please, in my back yard'). Even in developed and liberal economies, some communities support operations of the enterprise beyond its constitution of their solid source of earning. It also plays a significant role in shaping their communal identity and sense of place despite an impact on the bio-physical environment (Kojola, 2020; Ignatiadis et al., 2021). Furthermore, Paredes (2016) highlights communities that are welcoming these operations and co-existence in exchange for various local and regional benefits by the enterprise. Even conflicts which initially seem to be dead ended may transform into more open and relaxed co-existence. Extractive industries are currently operating within a political ecology context of corporate social responsibility (CSR), demanding them to become more attentive to local voices of the communities who, in turn, realize the positive and beneficial components of the multi-dimensionality of this encounter (Triscritti, 2013).

Indeed, the field of environmental conflict resolution has taken a significant turn during the 1990s from legal action to community dynamics (Menkel-Meadow, 2000). This turn highlights the increased direct engagement between the entities as stakeholders. The various models adopted are based primarily on building agreement and creating a consensus, and include circle sentencing, group conferencing, reparative boards, mediation and community consultation forums (Bazemore and Griffiths, 1997). The latter vehicle, a forum, refers to a joint structured and continual process between the community and the industrial enterprise, intended to reach conceptual and operational agreements (Green and Mercer, 2001; Lynn et al, 2000).

Opinions about the effectiveness of these forums in generating a genuine mutual trust and conflict resolution range from indubitable to dubitable (Lynn et al., 2000). However, beyond strict notions of conflict resolution, the value of a forum operating over a long range is significant to our case of examining relationships between the entities. This is important because we suggest that, as a continual process, the evolution of such relationships between the entities is responsible for producing

the nature of space over time and perhaps also its transformations. In accepting this presupposition, it is appropriate to contextualize these relationships within the relationality paradigm and the conceptualization of relational space. This paradigm (Thrift, 1996; Massey, 1998, 2005; Murdoch, 2005) argues, in the main, that space is a product of interactions, a co-constitution by entities of differing identities and natures, and in particular, following Foucault (1982), a product of embedded power-relations. It is these relationships, within an actor-network framework (Latour, 1991), rather than the entities themselves, that are important in understanding space (Callon and Law, 1995).

These relationships, and the nature of space they produce, may be categorized as either contested (through exclusion or forcible engagement of entities), or consensual (through agreements and alignments). As put by Murdock, relationships are inevitably double-edged: they can entrench confinement and exclusion, but equally they can facilitate movement and access (2005). Consequently, these two edges might be described as spaces of prescription, or dictation, versus spaces of negotiation (Murdoch, 1998). However, the dialectical nature of relationships suggests also that this is a spectrum rather than a discrete dichotomy. Furthermore, spaces are not necessarily static. Following Deleuze and Guattari (1987), they are rather dynamic, turbulent, becoming and reproduced and hence transform their nature following changed relationships. Therefore, a space of prescription is not necessarily an unchangeable condition. Long standing extremely unbalanced power relationships may, through their internal and external dialectics, transform more harmonious and produce a space of negotiation and, as we suggest below, perhaps beyond. There are circumstances, however, whereby legal tools grant extractive enterprises a territorial control power that still creates a space of prescription. In a relational terminology (Murdock, 2005), under such condition space may not necessarily be exclusively about relationships, because territoriality may be asserted by the enterprise over relationality, or in other words, insisting on its power rather than negotiating with the communities.

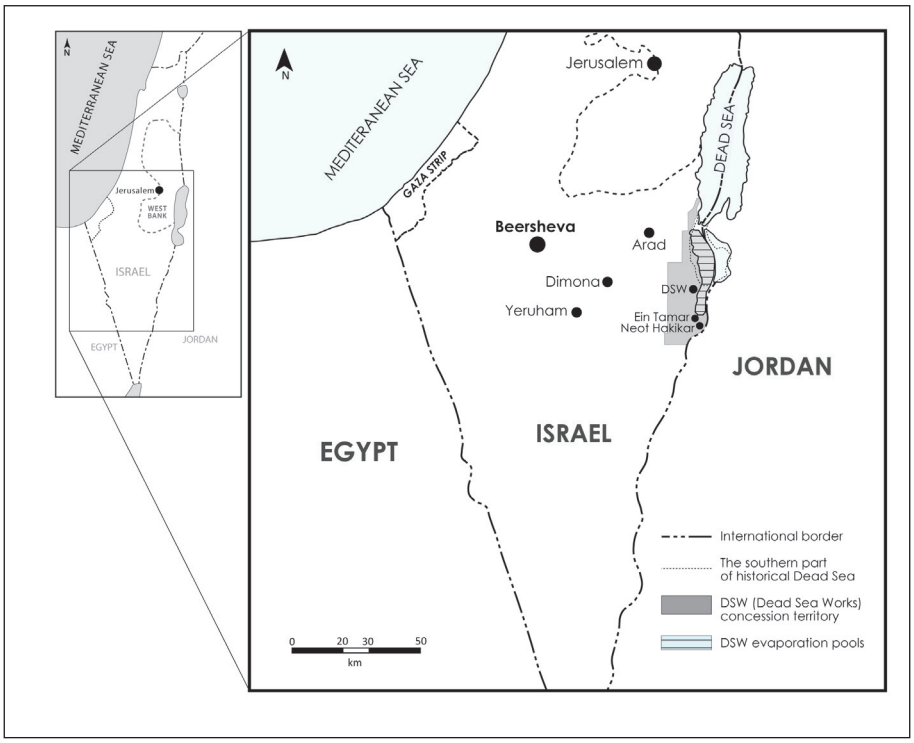
Taken together, the evolving relationships between rural communities and an extractive industrial enterprise can co-produce the nature of the extractive space (Bebbington et al., 2008) whether directly or through involvement of a third party. With these thoughts in mind, this article examines in detail the dynamic relationships between the extractive enterprise and local rural communities of Sodom Square, as well as the nature of space produced by these relationships, through the continual operation of a community consultation forum established by a third party.

THE ENTITIES

Dead Sea Works, previously owned by the state and now by Israel Chemicals (ICL), extracts and produces bromine potassium and magnesium products in the

Dead Sea. It has been operating in this Syrian African Rift Valley in the eastern Negev desert since 1929, first under the British Mandate government of Palestine and later under the State of Israel. In exchange for tens of millions of dollars in annual royalties, the 1961 concession grants DSW exclusive rights over a land and sea area of 600km2 (Figure 1) and "is not subject to any civil law" (Israeli Parliament, 1961). Practically, it has been operating as a quasi-local authority with operational control over this territory such that other development projects that are approved by local, district and national authorities are still subject to DSW's discretion. By virtue of its enormous structures and infrastructures it constitutes a concrete locality. It employs about 4,000 workers, mostly under work contractors, who commute from their home urban localities in the Negev region away from the compound.

Figure 1: The study area



DSW's local and regional environmental footprint has been enormous. Together with its cross-border Jordanian counterpart and other users of regional and national water resources (including the Palestinian Authority), it has contributed considerably to shrinkage of the Dead Sea by transforming its southern part into evaporation pools. It has also been quarrying materials from nearby wadi (dry river) valley beds for constructing dykes and hauling water from its northern part through canals.

These operations entailed also significant physical and chemical impacts on Dead Sea geomorphology and hydrology, including dozens hazardous deep sinkholes along its shorelines. It has been drilling and pumping regional ground water for its manufacturing purposes; diverting wadi channels to protect its pools, installations and structures from desert flash floods; constructing many local logistic roads; building water reservoirs, water hauling systems, water treatment pools, gas pipes, a local power station, power infrastructures, a conveyer and terminal; causing air pollution from chemical emissions, industrial dust from extract piling, and other operative sources: and soil and groundwater contamination from waste and sewage water. These activities have been consuming considerable territory with considerable impact on the topography, drainage systems, ecosystems and landscapes. Some of its operations have been extending far beyond its concession territory, impacting regional and not only local bio-physical systems.

Consequently, DSW has been subject to severe public criticism, protest and legal action by regional and national environmental NGOs and vigorous governmental regulative attempts (Avnimelech, 2006). By 2000, IC joined the international program of Responsible Care (RC) of the International Council of Chemical Associations. The major demand by ICCA has been that participant corporations adopt the procedures of publicly monitoring and releasing information regarding environmental safety, human health and nature of products, and that all surrounding communities are considered stakeholders (ICCA, 2021). Shortly after, DSW has begun internalizing these demands regarding air pollution, including commitment to the various kinds of ISO.

The bio-physical environment of the Dead Sea is extremely unfriendly for human habitat, with average summer temperature above 40°C, annual precipitation less than 50mm and highly alkaline soils (Tal, 2010). Thus, despite a very active state policy of settlement along the national borders in early statehood years (Amiran, 1991), the area bordering Jordan around the southern tip of the Dead Sea, biblically renowned as Sodom Square, remained unsettled. Only in 1970 the first rural community, Neot Hakikar, was established (present population ~400), followed by its neighbor Ein Tamar in 1982 (present population ~200). Both are located in the southern edge of the concession territory of DSW, bordering its fenced operative area (Figure 1). Their livelihood is based on a mixture of commercial winter vegetable crops and dates and desert tourism. There are several nearby springs mostly of undrinkable quality but suitable for irrigating some salty crops. Requests for expansion of residential and agricultural areas to accommodate absorption of the second generation of farmers were persistently denied by the development authorities due to shortage of land, proximity to DSW and existence of a nearby natural reserve (Authority for Rural Development, 2008). The area is governed locally by Tamar Regional Council.

In 2005 a public forum for environmental responsibility was established for DSW and these communities by Sustainable Development of the Negev. SDN is an

environmental NGO based in Beer Sheva and notable for organizing industry-community environmental forums in the Negev region. These forums are unique in that they were not initiated by the industrial enterprise, as common elsewhere, but by an independent environmental NGO. Yet, contrary to most of its other forums in the Negev region, which were conducted in metropolitan Beer Sheva facing nearby industrial enterprises, this one is unique in that for the first time it engages solely small remote rural communities. The leading principle, part of the agreeable by-laws of the forums, has been that the enterprise is committed to agreements regarding its operations reached with community representatives.

The forum in the Dead Sea was led by a representative of SDN, with about 7-12 representatives of the communities and 3-5 representatives of DSW and ICL participating in each session. Representatives of relevant local regional and national governmental agencies, Manufacturers Association of Israel, Dead Sea Hotels Association and other environmental NGOs participated occasionally as non-member bodies. Each session lasted about 2-3 hours with the agenda predetermined in mutual consultation and minutes approved by both sides in successive sessions. It was agreed that every third session convenes in DSW offices, and the rest in the communities.

METHODOLOGY

The present study used two sources of data. The first source was minutes of the annually five-six sessions. The first five years of the forum (2005-2009), with twenty sessions, were regarded by us as formative in the development of relationships in this region. The minutes were analyzed qualitatively through a thematic analysis. Major themes related to various bi-lateral issues that emerged in terms of relationships between the communities and DSW were extracted. In examining details of this body of data we were able to discern and typify three discrete stages in the evolution of relationships, which are described in the sections below and later interpreted in terms of the type of space produced by them.

The second source was in-depth interviews conducted during 2017 with five community leaders and four acting and past DSW and ICL top officers. As the temporal dimension is highly essential in understanding such long-term relationships, this source of data has become particularly significant. These geographical entities are composed, first and foremost, of individual subjects. It is through their scale of participation and discourse, beyond the minutes, that understanding these relationships can also be attained. The interviews allow delving into deep subjective issues that relate to personal experiencing and narratives of the nature of relationships that are unreachable in the objective and impersonal data of the minutes, especially in the pre-forum years. Due to the complexity and multi-faceted nature of relationships, understanding them must rely on a rich and thick analysis. Therefore, our

analysis below presents multiple topics recorded by the minutes, as well as quoting quite extensively from the interviews, to highlight historical and personal nuances of this process.

The forums and interviews were led and conducted by a representative of SDN which is also the first author of this article. From an ethical perspective, avoiding bias and conflict of interest was necessary, which leans here on two foundations. First, from the perspective of data sources, the fact that all minutes were approved by all participants guarantied their authenticity and genuine representation of their contents. In addition, the interviews were conducted to afford forum participants the opportunity of reflecting critically upon the entire process in-person. Taken outside the auspices of the forum and free from the impact of its internal dynamics, they guaranteed their first-hand perspective from a remote temporal position of an almost decade-long time span.

Second, from the perspective of data analysis and interpretation, it is not uncommon that an organization's internal agent studies its conduct (Hesse-Biber and Piatelli, 2012). This however requires a clear distinction of the insider-outsider boundaries and extra care and reflexivity in analysis, particularly with qualitative data. Reflexivity was practiced here first through a joint process by all three authors of analyzing the raw data in the minutes and interviews. Second, it included breaking the body of raw data into as many pieces possible and evaluating their meanings from as many angles as possible. This involved searching and researching for as many direct and indirect expressions and manifestations of various types of relationships in as many aspects possible among members of both SDN and the communities. Through these measures we were able to position the insider positionality through the lens of an outsider perspective and guarantee a balanced and objective evaluation of all raw data free from bias and conflict of interest.

STAGES OF RELATIONSHIPS

As noted, examining details of the minutes and interviews enabled us discerning and typifying three discrete stages in the evolution of relationships in Sodom Square: detachment and alienation**,** friction and negotiation, and collaboration.

Detachment and Alienation

This stage of unfriendliness and separateness is key to understanding the evolution of relationships between DSW and the two communities and refers to those initial moments when SDN approached them to participate in a forum. Early contacts with ICL, the corporate owner of DSW and other enterprises in the Negev, were initiated in 2001. Following two years of preliminary negotiations and agreements with IC regarding the forums in general and launching them in urban communities in the Negev region, ICL was approached about a forum with DSW and

the Sodom Square communities. Of top significance is the fact that at the time, in their remote Beer Sheva headquarters, ICL and DSW officials were confident that the communities intended by SDN for the forum are urban residential localities of DSW workers rather than their two three-decade rural neighbors.

This moment is emblematic of the relationships until the 2000s. When reflecting in 2017 upon their past perspectives, enterprise officials remarked that their encounter with them took place "only during our infrastructure works beyond the fences" (BV*, the asterisk denotes enterprise official). This attitude is cast within the enterprise's self-image of fulfilling a national ideological mission: "Since Israel's birth, DSW has been closely connected to the Zionist project of blooming the desert. National leaders paid us great respect for this" (YY*). This prideful self-image entailed a disregard of the communities and their environment at the local level as something imposed upon them: "Our state of mind was one of 'They are a nuisance. Why level with them? We pay royalties, it is ours, our call'" (YY*); "We felt there is nobody else here but us. The concession granted us rights over this place" (AG*); "What exactly is *their* right or status?" (YY*). Even with regard to the bio-physical environment, "we were confident about our compliance with regulations of the Ministry for Environmental Protection" (TZ*), and fully mindless of the emerging currents of "distributional and environmental justice and that we were in control of what is indeed public domain. Equity was not really our concern as industry" (YY*), only "our economic well-being as business" (BV*).

The Sodom Square communities were approached by SDN in 2004. Their residents were not fully aware of the possibility of action against DSW. While acknowledging that DSW "agreed that we settle on its concession land" (KA), at that time in the early1970's, however, "we did not really mind the concession and that the land is not ours. It took some time to understand what it meant (EB)" in terms of well-being and environment. Being aware of the "monster out there" (KA), "with a very negative connotation of air and water pollution and waste" (EB), and "fearing diseases" (IB-D), it was still untouchable: "they had the power, we felt their might, their in-approachability" (EB), "complete detachment with no interface" (KA). Even Tamar Regional Council could not "represent us vis-a-vis DSW" (AM); "It felt like 'them and us', no mutuality" (EB), as if "the regional council and DSW are something else". Furthermore, "even the agencies that settled us here were, on their part, interested only in our farming performance" (EB), being powerless too. In fact, the communities could not negotiate with the enterprise any of their pressing issues.

Skeptical and loaded with prejudice, when approached about the forum the communities, however, welcomed this "joint DSW-communities forum as a suitable platform for negotiating many issues" (AM). In such situations one would normally expect the vulnerable communities to be the most suspicious and apprehensive side regarding a forum. Yet, the powerful DSW had its own apprehensions too: "The idea of a forum was initially accepted by us with quite a bit of misgiving that the local people would not trust us, that we are untruthful, despite compliance with the

environmental law" (TZ*). Self-assumption, separation and mutual suspicion were thus the pillars upon which the relationships between the entities were revolving at that time. Indeed, in the first session a DSW senior officer expressed a concern whether a trustful contact can be established and how the communities can be truthfully accessed.

Friction and Negotiation

It took thus several frictional sessions to attempt eliminating these mutual apprehensions. The first and prime concern of the residents was air pollution. Unlike DSW workforce, as the only inhabitants in this territory they have been viewing themselves as the sole bearers of the environmental hazard. A major issue was therefore raised as to its monitoring and prevention. Despite several monitoring stations on enterprise premises as required by the Ministry of Environmental Protection, residents viewed as ill-decided both their location and monitoring method. Therefore, they insisted first upon transferring the station into their communal grounds and transparency in monitoring it as measures of trust-building. For DSW this meant a costly project and therefore offered to connect resident home computers to the existing stations' monitoring system. In response the residents requested intervention of the district officer of the Ministry to solve this dispute, consult with them regarding the exact location of the station vis-a-vis the local wind regime, and install detectors on the fences of their localities. In addition, the decision of DSW to install emission receptors only in their chimneys was responded critically by a demand for several more on community grounds. Following this, DSW decided on installing a second monitoring station and detectors in the communities.

Residents also expressed concern for two other pressing environmental issues. The first was the threat to their homes and farms by flash floods due to diversion of the nearby Tzin stream by DSW. Following actual flood damage to crop fields, they demanded compensation to which the enterprise refused. The communities filed and won a lawsuit, received compensation, and soon after DSW also began flood prevention works. The other issue was the considerable damage caused by DSW to local natural landscapes. Following a demand by the communities, it was agreed that DSW undertakes rehabilitating its deserted quarrying sites in stream beds around the communities and their transformation into small tourism sites, in cooperation with the Fund for Rehabilitating Quarries. This included also northern sites in the Dead Sea area, further away from these localities. A new project was also announced in which DSW, together with the regional council, would finance rehabilitating the nearby salt pan (*sabha*) and springs area, transforming it into a natural reserve. These projects were of course pending collaboration with the state Authority for Nature and Gardens, and approval of standard plans by the district planning committee.

Beyond environmental issues, another pressing one, inherent to their relationships with DSW, was raised by the communities. In the mid-1990s they realized the direct constraints on their economic social and physical well-being of living within

the concession territory. This effect was manifested in growing shortage of territorial space and other material resources needed for developing new crops and for accommodating residential and farming needs of their second generation. Under this pressure, they approached the authorities in 1996, requesting DSW to relinquish a certain part of its concession area, but their request was denied as this area was planned already for two more evaporation pools for DSW. In 2005, the newly established forum provided a new opportunity and the issue was brought up again, now compelling DSW into its reconsideration. The residents invited enterprise representatives to visit their localities to share these problems with them. Following this, a year later DSW complied with their requests and relinquished 90ha (about 1%) of its concession area. It also harnessed its technological proficiency to construct an irrigation pipeline from a nearby salty spring needed for developing the new crops. Further to this critical issue, the possible employment of residents by DSW, particularly engineering students from among the second generation, was also raised along with sub-contracting some technical services to local resident suppliers such as locksmiths, inspectors etc. Residents also proposed that DSW considers accommodating its international visitors in their tourist guest houses.

These very early stages of the process indicate a somewhat rough travel on the route marked by the forum. Committed to RC regulations, and striving towards an improved connection with the communities, another measure taken by the enterprise was opening itself up more transparently with the local people. It gradually began sharing with them the nature of its various operations, including production processes, physical and chemical impacts on Dead Sea's geomorphology and hydrology, future development and expansion plans, air quality policy, and so forth. Yet, subjective experience with air pollution by the residents was a far cry from the objective data presented by DSW, even arguing an increase in thyroid and respiratory diseases due to bromine and potassium industrial dust. Upon their request, DSW representatives also shared information regarding technical problems and hazardous failures and accidents, such as emission of chloride bromine from the manufacturing facilities and CO2 from the power plant, something they felt could even incriminate the enterprise as well as themselves personally. Following this move towards greater transparency, it was agreed to prepare jointly a special learning program in environmental protection for the residents.

After about two years, a re-evaluation of the forum was taken by its participants. In general, following demand by the communities, it was agreed that they participate in any negotiation between the enterprise and government agencies regarding environmental issues, and that the forum becomes the exclusive body for decisions upon their bi-lateral issues. In addition, an important step forward was made with a decision on a joint standing committee to execute the agreed upon issues. This became an informal and more direct channel of communication, beyond the formal forum. Upon request by the communities, it was also jointly decided to expand the circle of participants in the forum regionally and nationally through an oc-

casional inclusion of representatives of the regional council and the Ministry of Environmental Protection. These organizational measures, intended towards improving the functioning of the forum and the interface between the entities, reflect a sense of initial success by all participants, and a desire by both sides to proceed with the process. Stretched over the first two-three years and 8-12 sessions, the growing range of the negotiated issues, from sheer environmental to economic ones, reflects an attempt in mutual understanding of each other's interests, needs and constraints.

Collaboration

As the sessions approached their fourth year, mutuality between the entities began to grow. Becoming more confident about DSW's intentions, residents were expressing a growing interest in its specific manufacturing processes and emergency practices and requested further fieldtrips to the plants. In response, and preparatory to these visitations, the enterprise initiated detailed presentations in the forum. These covered releasing additional information regarding new measures to reduce emissions and odor nuisances through preventive and monitoring technologies, such as reporting significantly reduced emissions of industrial dust due to installing improved receptors on chimneys. Emergency regulations regarding industrial accidents, flashfloods and earthquakes were also shared with the communities, including how the latter could be integrated into this system, for example via immediate response to direct grievances by individual residents. By mid-2009, an idea raised earlier in the forum fruited into exercising a joint daylong emergency defense and evacuation event by both entities. Residents also expressed concern about remoteness of public medical services, and requested that DSW's facilities (e.g. ambulance, paramedic, infirmary, etc.) become available to them too upon emergency, which were responded positively. DSW saw fit, under its RC commitment, to report even those future projects allegedly unrelated to the communities, such as a Red Sea-Dead Sea canal intended to import water to prevent further falling of Dead Sea water level. The communities, however, viewed this gigantic project as directly relevant to them in all its environmental economic and social spheres, referred independently for external academic opinion, and used it for voicing their position. Another such project concerned constructing dykes around hotel resorts further north of DSW to protect them from the rising water level of evaporation pools due to salt accumulation. In this latter project residents requested being consulted with regarding the local sources of quarrying material for the dykes.

Residents became confident enough to attempt a further expansion of the issues negotiated, now into cultural ones related to development of local tourism. Upon their request, DSW provided financial and logistic support to a pottery-art festival organized locally, and later encouraged its own workers to host open house events in their home localities, exhibiting arts created by the communities. Collaboration in jointly celebrating national holidays, sports and weekend events was also brought up, complemented by a joint planning of Ein Tamar's 25th anniversary. Residents

were also pleased to report progress in accommodating sixteen new households on the land relinquished by DSW who itself expressed interest that some of this residential space in the communities is allocated to its worker families.

In the meantime, DSW kept reporting progress in implementing projects agreed upon in the forum. This included installing the monitoring station on community premises and its online connection to resident homes, rehabilitation of the old quarrying sites, admission of several student-residents into an internship program with scholarships, searching a wider range of student-proficiencies beyond engineering, such as chemistry, economics, ecology and agronomy for ICL's other factories in the Negev, and even hiring several local residents. The enterprise also offered support in transferring surplus farm produce to needy localities elsewhere and in networking Dead Sea resort hotels with the communities for purchasing farm produce.

Finally, in 2009 the enterprise reported making a strategic decision of devoting unlimited financial resources to environmental issues. In this decision it included transferring the power plant to natural gas and green building of future structures. Upon demand from the communities, the scope of DSW environmental CR expanded beyond air pollution and landscape issues. This included improving its industrial and sanitary sewage treatment through recycling and removal of gray water into licensed sites, local and regional biological eradication of its operations-related mosquito nuisances, removing accumulated industrial scrap from the concession territory and mapping more than 100 hotspots of its local environmental violation. In advancing this highly significant move, the enterprise conducted another visit to the communities, now with a group of forty senior staff, to acquaint them with these local and regional issues, and thus infiltrate the spirit of the evolving enterprise-community relationships further down its management ladder.

The most significant indicator of the growing mutuality was that one of the later sessions in 2009 was devoted to open reflection upon the significance of the direct interface created between the two entities. The session concluded that DSW indeed practiced transparency, that it responded positively and in good will to most community demands and requests, that it genuinely has been striving for broad cooperation, and that mutual trust was building up. Following this, DSW accepted the request by SDN, the initiator of the forum, to support the establishment of an environmental education center in the regional high school that would serve also as its local branch for monitoring these bi-lateral environmental issues.

The accumulation of these latter moves with previous ones reveals attempts by community residents into wider cooperation with DSW, while the latter seeks ever expanding engagement. It reflects significantly reduced alienation, gaps and friction between the entities, an increased mutual trust, a growing capability for negotiating and resolving pressing issues, and development of a common local and regional interest in caring for the joint ecological and social environments and resources.

Decade-later Reflections

The forum convened until 2020 for about additional fifty sessions when suspended by COVID-19. In the interviews conducted in 2017 participants reflected upon the formative period of 2005-9, achievements and failures and experiences regarding the relationships. In several respects, these perspectives correspond with the views expressed in the minutes in 2009. In contrast with the somewhat dryness of the minutes, these perspectives reflect a more emotional expression of experiences.

DSW representatives spoke of the significant lesson learnt regarding its role within this region. They relate first to external processes: "There was a growing public atmosphere of environmental and distributional justice in Israel. We were portrayed nationwide as an unequitable enterprise" (YY*). Second, they relate to their role within the public domain: "We realized that the Dead Sea is not owned by us… that we were exploiting public property, and therefore we bear responsibility" (YY*). Third, DSW realized what this meant in terms of its bio-physical and social environments: "We did not live in peace with our physical environment, we did not consider our environmental implications" (BV*). Also, "We understood there are other stakeholders in these raw materials—the communities, the regional council, tourists, the state, each with its own interests which have to be mapped and understood. It never occurred to us before" (YY*).

This cognitive process was in great measure a consequence of the direct encounter with the communities: "Some finance allocated to environmental solutions would not materialize if it were not for the forum" (TZ*). This commitment was gradually translated into policy and action whereby "The top management adopted a new green policy of 'beyond literal compliance' with environmental laws" (TZ*). For example: "We decided on the best monitoring station [for the communities] there is" (TZ*). Furthermore, "Our communication with the communities improved" (BZ*). Realizing that the communities know what is best for them, and responding to their environmental initiatives, "We persuaded the Ministry of Environmental Protection to allow us act beyond regulation vis-a-vis the communities" (AG*). Improved communication was also translated into trust: "We felt their confidence in us was building up" (TZ*). It also entailed mutual benefit: "The residents are now our second 'eyes' on the ground, they alert and inform us of nuisances and deviations" (BZ*).

The process is also manifest in how they view the changing relationships themselves, "…from a place of each to his own to a place of togetherness. Our investments in environmental solutions were not meant for us or for the regulation, but to avoid risking the people. We exploit [their] nature but we don't *live* here. *They* live here, the place belongs to them more than it is ours. We need to infiltrate this down our staff and worker ranks and think ahead of how to further intensify these relationships" (AG*). Also, this place is emotionally significant: "As an extractive industry DSW is different. Our dependence on the natural resources connects us to this place in a very strong and unique bond" (YY*).

Few residents do not wholeheartedly share the general spirit of these views. Incognizant of regulative constraints, "I was expecting more. DSW could allow us developing a resort beach in the nearby evaporation pool, which could be a great boost. Yes, they helped in few fields, but unfortunately, I was expecting tighter relationships and greater contribution to regional growth, particularly in tourism" (JE). Most other residents interviewed, however, are quite content with the emerging relationships. From their perspective, the neighboring giant "is no more an alien and threatening creature" (IB-D). They realized "there are human beings, and they have become considerate with us, we can communicate with them" (IB-D). Beyond pride in their community as "a great place to live and raise our children" (IB-D), they relate to the significant change in DSW's attitude towards them: "This giant, dominating this terrain, treats us now as equals. They have been doing amazing things for us, safety, scrap removal, rehabilitating sites, emergency, medical first aid" (IB-D). "They relinquished land for our expansion. They compensated us for flood damages and fortified our flood defense bars" (KA); "DSW has become committed to us" (EB). This entails more intimate emotions: "Nobody outside this region can really experience DSW firsthand like us now" (IB-D), alluding to its many critics. "Our fears are gone" (EB); "We feel they are part of us" (IB-D); "They must become part of our community" (KA); "We can adopt each other, perhaps allow a neighborhood for their workers. It is very important to the common future of this region" (EB).

These changes sum up to residents' view of the general nature of their relationships with DSW: "The forum has built a web of relationships which brought us closer to each other" (IB-D); "We must leverage it to further promote our relationships" (KA); "It can empower both sides" (EB); "This is highly essential for this region, for these entities. I wholeheartedly believe in these two entities" (KA).

INTERPRETING EVOLUTION OF RELATIONSHIPS IN SODOM SQUARE'S SPACE

The circumstances of these relationships are complex in several respects. First highly significant in relational analysis is multiplicity of scales and contexts (Massey, 2005). Both Sodom Square communities and Dead Sea Works may be looked upon at multiple scales. DSW may be looked upon first at the national scale, with significant contribution to national economy but persistently very high rating on the national corporate environmental impact index (Ministry of Environmental Protection, 2021) and decades-long critical media coverage regarding financial conduct vis-a-vis the government (e.g. Roe, 2021). Yet, this cannot obscure its being also a mundane geographical entity situated among neighboring rural entities at the local scale. Neot Hakikar and Ein Tamar may be looked upon first at the local scale of small rural communities struggling for survival in a remote harsh and desolate arid environment. Yet, this cannot overshadow national scale governmental policies

of settlement of the 1970s, inconceivable nowadays, responsible for their being rural geographical entities within this extractive industrial space.

The second respect is local contextuality that is, the local conditions within which these geographical entities exist. In the pre-1970s DSW was situated in a desolate desert space, coping solely with nature. Rurality was imposed onto its urban-natured industrial operations by a national policy of rural settlement, compelling it to cope now with people too. The communities, for their part, were not forced to settle in this place. As individuals they chose to respond to a national ideological campaign of blooming the desert along the national border. By assembling into communities and migrating there, however, they were compelled into neighboring an environmentally notorious industrial entity which is persistently backed by the government. Their expectations of an idyllic agriculturally natured place were interrupted by an alien industrial nature imposed upon them. In fact, both entities became each other's NIMBY. Corresponding with global trends (Qvistrom, 2007), Sodom Square became thus a complex place whereby the values of urbanity (through industry) and rurality (through agriculture) are highly intermingled.

Third, as asserted by Murphy (2005), power and status of entities are highly significant in understanding relationships between them. DSW enjoys an enormous economic and political power and status by virtue of holding its legal concession. Its thousands of workers reside far away and disconnected from local nature, hence even an impact upon their home bio-physical and social environments, as is common among extractive industries elsewhere (Paredes, 2016), is not at issue here. And yet, this power is significantly eroded by its problematic environmental and corporate reputation which it wishes to change. On the other hand and untypical of many communities neighboring extractive industries worldwide (Triscritti, 2013), the Sodom Square communities are not weakened or indigenous populations, vulnerable to effects of development or globalization on a geographical periphery, nor are they accountable to DSW in terms of their would-be major employer. This independence is their potential source of power in freely asserting their views, opinions and emotions about their place, their neighbor, and their relationships with it. As pioneer settlers of the rural desert frontier, they also belong to a highly esteemed national elite group in Israel, endowing them with symbolic capital and further potential power.

In fact, Sodom Square is the only shared asset by both entities. However, it is a restrictive and contradictive spatial setting whereby both were compelled into its coproduction through the dynamics of their powers and weaknesses. Each side holds its own sense of place as a geographical entity. As an industrial place, DSW's sense of place in early years revolved around spatial exclusivity remoteness and emptiness, close to what is known (Fitzmaurice, 2007) as *terra nullius*. This was accompanied by pride of its industrial creation and producing regional and national added economic values. The communities, despite their small size, are too very proud of their agricultural and communal creation and their own added economic and social values.

Yet, emanating from DSW's quasi-jurisdictional status, co-production of this space has begun under highly hierarchical conditions. The 'steepness' of this hierarchy was manifest in DSW's inapproachability and the communities' powerlessness, a one-sided assertion of power, what Murdoch (2005) would term a space of prescription.

Assertion of power was not realized by the communities until Sustainable Development of the Negev, as a third party, created the unique, hitherto unavailable, opportunity for change. As a grass-root NGO, SDN's independence became a significant component in increasing self-awareness of their power in capacity building. During the negotiation phase this capacity included their awareness of DSW's contradictory economic and environmental reputations which entailed suspicion of its genuine intentions. The latter, for its part, was aware of this reality, entering this phase of relationships under suspicion about its credibility among the communities. The decision by the forum to expand the circle of participants, to occasionally include other national and local governmental agents, provided both sides with a safety umbrella of a local network for environmental responsibility.

Thus, from a very narrow system of relationships, the entities entered a phase of growing intensity, with diverse issues and problems to be negotiated and solved. The circle of these issues has gradually expanded functionally and spatially, reflecting a transition of the entities from conflicting to locally shared interests. In terms of the functioning of the shared territory, the range of issues expanded in time, from environmental to social and then to cultural. The spatial coverage of these issues expanded too, from the local to the regional scale to include agents and environments in the Dead Sea area at large, such as the resort hotels, and even beyond. From a space of prescription, Sodom Square has thus transformed into a space of negotiation.

With time, grasping these relationships as well as the language used by the entities changed too. Inspired by an emerging global corporate atmosphere of environmental and social responsibility, DSW had now to face the practical encounter with the local communities and the various mundane nuances of its corporate responsibility. This entailed adoption of a more ecocentrically-oriented rather than solely an anthropocentric-economic terminology, reflecting an emergent grasp of the ethical differences. Thus, terms such as public domain, natural resources, natural values, and environmental conservation and rehabilitation joined the previous business-oriented ones of concession territory, raw materials and industrial products, reflecting its expanded vocabulary and grasp of the local bio-physical environment. This grasp, however, covers now also a realization that the environmental and the social are not independent of each other and of the economic within what is currently regarded (Kleine and van Hauff, 2009) as the sustainability triangle. In this respect, the enterprise not only reveals itself and its industrial operations more openly vis-à-vis the communities or responds more willfully to their environmental demands. In realizing these it also levels with them about the value of their own local knowledge as residents regarding its present and past environmental hazards and exploited resources. All these translate into social responsibility of protecting their personal

and communal environment to an extent of even harnessing its status in attempting environmental entrepreneurship on their behalf vis-à-vis the government.

The communities too began to change their own language towards DSW. They realized the more humane aspects of this enterprise as a living entity with human beings, not just an inanimate industrial compound. Under conditions of what is known as deficit of government (Hant et al., 2008), they also realized their benefit in viewing more positively the economic and financial might of this industrial giant. They view it as a local authority capable of substituting government in this desolate region by caring not only for their environmental wellbeing but providing some of their other social and economic needs, such as medical emergency services and networking with regional economic agents. In fact, governance-wise, the forum itself became an informal local 'cabinet' for handling various bilateral issues in Sodom Square, and hence both sides invest efforts in improving its functioning. The communities also gradually realized their own status and symbolic assets as social elite, transforming this social resource into power in their relationships with their neighbor. Accepting DSW's material giving for improving their environmental and economic wellbeing, they view themselves as capable of supporting locally their neighbor's strive to materialize its corporate commitment to RC. Within the emerging nature of relationships, whereby mutual trust was building up, they view this support as their own, non-material, giving and reciprocation to DSW. This moderates the previously steep hierarchical relationships.

All these issues sum up to emergent shared local identity between the entities. Each side attempts to implant within the other's consciousness its own sense of place, whether originating in its urban-oriented industrial identity, or in rural-oriented agricultural one. Both identities are anchored in a shared Zionist ideology of developing the desert. In certain respects, the communities imagine even greater shared Sodom Square identity and closer relationships with DSW, co-becoming into a closer joint regional community. The latter, as the dominant entity, by virtue of its concession and economic might, relinquished the option of rigid assertion of territoriality. Instead, it opted for relationality that is, turning outwards into negotiating its relationship with the communities towards greater mutual acceptance within this territory. Thus, from a space of negotiation, preceded by a space of alienation and prescription, Sodom Square has become a space of collaboration.

CONCLUSION

The analysis of relationships between rural communities and Dead Sea Works in Sodom Square contributes to the current knowledge in two respects. The first is specific to spaces of extractive industries in rural areas. Unlike most cases worldwide, this case is unique in that it does not involve land rights, territory grabbed by the industry, a labor dispute or dependence of local labor upon the enterprise. It revolves

around environmental issues between two entities who were imposed upon one another under specific legal and political circumstances. Yet, suffering environmental hazards from the extractive enterprise, this case points to a growing trend by communities to assert the *power of relationships* within a shared territory rather than *power within relationships* (i.e. power relationships). Whether voluntary or out of necessity, by this both entities realize each other's needs in areas previously inconceivable and accept the social and humane aspects behind the materiality of each entity. Hence, between NIMBY and PIMBY relationships, we may think also of another variant, a WIMBY ('Well, in my backyard…').

The second contribution is related to understanding more generally how the nature of space is produced. Studies of extractive industries facing communities commonly revolve around environmental conflict resolution issues. This study took one step further: the relationship between the entities and the nature of space as *a product* of such a conflict. Therefore, we suggest that the insights derived are relevant to a broader understanding of space. Applying the notion of a geographical entity to a compound that is a non-formal locality, such as an industrial site, a military camp, a college campus and others, all of which are integral to any possible spatial fabric, awards it concreteness, placeness and a quasi-social community vis-à-vis other neighboring localized communities. This allows an analysis of their mutual relationships and the nature of space produced by these relationships. Understanding this nature, through notions of relationality, is significant in grasping the local/regional well-being that is, how stressful or relaxed are the conditions under which local people conduct their life given their relationships in this space. Furthermore, relationships are not necessarily static, rather they are becoming, and hence are dynamic, whether through internal dialectics or intervention of a third party, inviting into play the temporal and not only the spatial dimension. Our methodology facilitated surfacing the evolution of relationships and hence of the nature of space co-produced over time, e.g., as transformed from stressfully prescriptive to willfully-negotiative and then to trustfully-collaborative.

Finally, relationality suggests that understanding the nature of space through relationships between geographical entities is possible wherever these entities exist. However, there is a geographical variance and particularly differences between rural and metropolitan areas. The attributes of Sodom Square rural area are mainly remoteness, population sparsity and spatial isolation. These constitute a unique quasi-laboratory analytical framework for understanding the role of geographical entities in space, their mutual relationships, and the nature of this space as it evolved in time, free from much external 'noise'. Analysis of such relationships is considerably more complex in less isolated rural areas and particularly in metropolitan regions, where multiple geographical and non-geographical entities and agents are involved and interfere. The contribution of the present study allows a starting point in meeting this challenge towards understanding how metropolitan spaces too are co-produced by relationships among various types of geographical entities.

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REFERENCES

Amiran, D. (1991) Geography of rural settlement in Israel and its development at Israeli universities teaching and research. *Ofakin BaGeographia*, No.32, 29-37. (Hebrew)

Authority for Rural Development (2008) Allocating Farming Land in the Negev and Arava. Jerusalem: Ministry of Agriculture. (Hebrew)

Avnimelech, Y. and Eilon, A. (eds.) (2006) National *Priorities in Environmental Quality*. Haifa: Neeman Institute, The Technion. (Hebrew)

Bazemore, G. & Griffiths, C. T. (1997) Conferences, circles, boards, and mediations: The new wave of community justice decision-making. *Federal Probation*, 61, 25-37.

Bebbington A. Humphreys, D., Bebbington, J., Bury, J., Lingan, J. Muñoz, P. and Scurrah,M. (2008) Mining and social movements: Struggles over livelihood and rural territorial development in the Andes. *World Development,* 36 (12), 2888–2905.

Callon, M. and Law, J. (1995) Agency and the hybrid collectif. *South Atlantic Quarterly*, 94: 481–507.

Deleuze, G. and Guattari, F. (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis, MN: University of Minnesota Press.

Fitzmaurice, A. (2007) The genealogy of *terra nullius*. *Australian Historical Studies*, 38 (129): 1–15.

Foucault, M. (1982) The subject and power. In Dreyfus, H. and Rabinow, P. (Eds.) *Michel Foucault: Beyond Structuralism and Hermeneutics*. Brighton: Harvester Press, 208–27.

Gilberthorpe, E. and Papyrakis, E. (2015) The extractive industries and development: The resource curse at the micro, meso and macro levels. *Extractive Industries and Society*, 2, 381–390.

Green, L. W., & Mercer, S. L. (2001) Can public health researchers and agencies reconcile the push from funding bodies and the pull from communities? *American*

Journal of Public Health, 91(12), 1926-1929.

Helwege, A. (2014) Challenges with resolving mining conflicts in Latin America. Global development and environment. *Extractive Industries and Soceity*, 2 (1), 73–84.

Hesse-Biber, S. N., & Piatelli, D. (2012) Holistic reflexivity: The feminist practice of holistic reflexivity. In S.N. Hesse-Biber (Ed.) *Handbook of Feminist Research: Theory and Practice*. Sage Publications.

DOI: https://dx.doi.org/10.4135/9781483384740.n27

Hilson G. (2002) An overview of land use conflicts in mining communities. *Land Use Policy*, 19, 65–73.

Hunt, J., Smith, D. Garling, S. and Sanders, W. (Eds.) (2008) *Contested Governance Culture, Power and Institutions in Indigenous Australia*. E Press: ANU.

ICCA-International Council of Chemical Associations (2021) Responsible Care

https://icca-chem.org Retrieved 3.10/21

Ignatiadis M., Daigneault, A., Sponarski, C. & Reed J. (2021) Operationalizing sense of place to evaluate potential conflicts in natural resource-dependent rural economies. *Journal of Environmental Policy & Planning*, 23:4, 446-466, DOI: 10.1080/1523908X.2020.1858769

Israeli Parliament (1961) Dead Sea Concession Law, 17.6.1961. (Hebrew)

Kirsch, S., (2014) *Mining Capitalism:* The *Relationship between Corporations and Their Critics*. Los Angeles: University of California Press.

Kleine A. and von Hauff, M. (2009) Sustainability-driven implementation of corporate social responsibility: Application of the integrative sustainability triangle. *Journal of Business Ethics*, 85:517–533.

Kojola, E. (2020) Who speaks for the place? Cultural dynamics of conflicts over hazardous industrial development. *Sociological Forum*, 35, 3, September DOI: 10.1111/socf.12620

Latour, B. (1991) Technology is society made durable. In Law, J. (Ed.), *A Sociology of Monsters: Essays on Power, Technology and Domination*. London: Routledge, 103–30.

Le Billon, P. (2005) *Geopolitics of Resource Wars: Resource Dependence Governance and Violence*. London: Frank Cass.

Lynn, F. M., Busenberg, G., Cohen, N., & Chess, C. (2000) Chemical industry's community advisory panels: What has been their impact? *Policy Analysis,* 34(10), 1881-1886.

Massey, D. (1998) Power-geometries and the politics of space-time. Hettner-Lecture, Department of Geography, University of Heidelberg, Heidelberg.

-----. (2005) *For Space*. London: Sage Publications.

Meir, A. and Duenias, J. (2008) University, community, and shaping regional and local identity: A case study in Israel. *Journal of the World Universities Forum,* 1(3), 35-45.

Menkel-Meadow, C. (2000) Mothers and fathers of invention: The intellectual founders of ADR. *Ohio State Journal on Dispute Resolution, 16*(1), 1-10.

Ministry of Environmental Protection (2021) Index of Environmental Impact 2019.

https://www.gov.il/he/Departments/Guides/environmental_impact_index_public_industry_companies (Hebrew)

Moomen, A. and Dewan, A. *(2015*) Mining, agricultural space and land use conflicts: The role of local government. *Fourth International Conference on Agro-Geoinformatics (Agro-geoinformatics)*, 2015, pp. 228-233, doi: 10.1109/Agro-Geoinformatics.2015.7248103.

Murdoch, J. (1998) The spaces of actor-network theory. *Geoforum*, 29: 357–74.

-----. (2005) *Post-structuralist Geography*. London: Thousand Oaks.

Paredes M. (2016) The glocalization of mining conflict: Cases from Peru. *The Extractive Industries and Society*, 3, 1046–1057.

Perreault, T. (2008) Natural gas, indigenous mobilization, and the Bolivian state. Identities, conflict and cohesion. Programme Paper No. 12. United Nations Research Institute for Social Development (UNRISD), 27.

Qviström, M. (2007) Landscapes out of order: Studying the inner urban fringe beyond the rural – urban divide. *Geografiska Annaler (series B)*, 89(3): 269–282.

Roe, A. (2021) Ofer draws 1.5 billion SH from the state in exempt for using Dead Sea water. *Calcalist*, 24.11.2021 (Hebrew)
https://www.calcalist.co.il/local_news/article/b1fvqqq00f

Schilling-Vacaflor, A. (2013) Prior consultations in plurinational Bolivia: Democracy, rights and real-life experiences. *Latin America and Caribbian Ethnic Studies*, 8 (2), 202–220.

Tal, H. (2010) *Revolution in Sodom: The Impact of the Potash Company on Development of the Dead Sea Region and the Land of Israel*. Sede Boker: Ben Gurion Institute for the Study of Israel and Zionism. (Hebrew)

Thrift, N. (1996) *Spatial Formations*. London: Sage Publications.

Triscritti F. (2013) Mining, development and corporate–community conflicts in Peru. *Community Development Journal*, 48, 3, 437–450.