Chapter I: Introduction to Bookchin, Social Ecology, Hierarchy

The Viability of Life Itself: Ecological Crisis & Social Inequality

Anthropogenically related biodiversity loss has accelerated to a rate faster than the Cretaceous–Paleogene (K–Pg) extinction event some 65 million years ago (Cafaro 2015). Within this century, as many as two-thirds of all living species may go extinct - much of complex life is, or will be, threatened by the ongoing sixth mass extinction. Increased biodiversity has been a consistent and long-term trend throughout evolutionary history and, as Cafaro (2015) points out, planet-wide biodiversity is unlikely to have ever been affected to this extent by a single species. As biodiversity, a key indicator for ecosystem health, dramatically declines, there is an increased likelihood for climate disaster events. In the previous 20 years, 91% of recorded disaster events have been climate related (Walz et al. 2021). Devastation from climate change-related events is thus a symptom of the system-wide macro-extinction. Ecological collapse leads to climatic events, referred to as "catastrophe", "disaster", or "crisis".

Predictive modeling anticipates extreme climate events to increase in frequency and intensity, disproportionately impacting already socially vulnerable communities (IPCC 2022). Upwards of 33 million Pakistanis have been displaced by unprecedented flooding (Associated Press 2022). Some 160,000 residents of Jackson, Mississippi are indefinitely without potable municipal water after extreme rainfall and flooding of their

water treatment plant (NPR 2022). China's Sichuan province is enduring the longest continuous heat wave on record: 240 cities reaching temperatures above 100 degrees Fahrenheit, along with the country's first national drought alert in 9 years (Feng 2022). Media coverage of climate change in wealthier countries is often communicated as a domestic issue in the short term, a challenge best dealt with by technology, economics, and national security measures (Hase et al. 2021). This is opposed to reporting in poorer countries that tend to focus on climate change's long-term effects on international relations, its association with natural disasters, and social implications generally. This is particularly notable as the Global North is responsible for 92% of excess emissions (Hickel 2020). Climate change communication in the Global North tends to interpret causes and effects of the climate crisis compartmentalized from global-systemic inequalities.

Running parallel to ecological catastrophe, global social inequality is such that the world's wealthiest 1% own 45.8% of global wealth (Credit Suisse 2021) and the global population living in extreme poverty now exceeds 700 million (World Inequality Report 2022). Indigenous peoples account for 6% of global population, 19% of extreme poverty (OHCHR 2022), and inhabit 85% of global areas designated for biodiversity conservation (Schmidt & Peterson 2009). Income, consumption, and carbon emissions are highly correlated: 36-49% of all global emissions are produced by the wealthiest 10% of the global population (Green & Healy 2022). Imbalances in socioeconomic status allow for private for-profit industries to further expand carbon-intensive productions such as the

continued extraction of fossil fuels and rare minerals (Green & Healy 2022). Wealth inequality is a major driver of climate catastrophes and determines which communities are most vulnerable to effects of disaster (Cappelli et al. 2021). Catastrophic weather events account for on average 24 million climate refugees every year, primarily from Global South (IDMC 2021).

Profiteering has not been deterred by ecological catastrophes. The COVID-19 pandemic allowed for one of the largest upward transfers of wealth in history (Green & Healy 2022; Johnson 2020). Biodiversity loss is a crucial factor in zoonotic disease emergence (Lawler 2021). More than $500 billion dollars moved into billionaire holdings while over 40 million laborers filed for unemployment. Manipulation of the COVID-19 financial crash by elected officials (Slamowitz 2020) is both a flashback and foreshadows the "organized abandonment" (Gilmore 2007: 178) of past (ie. Hurricane Katrina 2005, Hurricane Maria 2017 in Puerto Rico), ongoing (ie. Hurricane Fiona 2022, also in Puerto Rico) and future socio-ecological disasters. Elsevier, a top publisher of scientific journals, was recently found to be aiding fossil fuel companies, offering publishing, data services, and research portals (Westervelt 2022). A recent investigation also shows that major oil companies, despite PR claims to the contrary, had no intention or technical ability to establish "net-zero" emissions Frazin 2022). Major oil companies saw multi-billion profits in July, 2022 (CBS News 2022).

While it is evident that human activity has fundamentally changed the biosphere, it is notable that populations who have contributed the least to this process are now

suffering the most. Cappelli et al. (2021) suggest that the risks of climate disaster, particularly when exacerbated by social inequality, are not as "natural" as they may appear. Biodiversity and social stability produce a dialectical relationship that is indeterminate and ambivalent: complex biodiverse ecologies are threatened in-part by social inequalities, while vulnerable, low socioeconomic status compounds the effects of climate catastrophe and biodiversity loss. While it is important to focus on the primary literature to best understand our environmental crisis, we may also benefit from broadening our focus to insightful autodidacts outside of the academy. Such efforts are especially helpful when they apply the high standards of evidence and argumentation expected in academia without being reflexively dismissive of the ideas of outsiders. Murray Bookchin is one such autodidact whose work deserves attention.

Beginning in 2016, the "Google Bookchin" meme began circulating online within predominantly environmentalist and radical leftist forums (Know Your Meme 2021). Murray Bookchin (1921-2006) and his literary career have since received renewed interest and study, especially in regard to his theory of Social Ecology. Social Ecology's foundational claim is that human social organization (ie. hierarchy, egalitarianism) profoundly affects how humans relate to ecologies. The work of this amateur political theorist is now a beacon for many attempting to both understand and repair human-to-human and human-to-ecology relations. If Bookchin's Social Ecology theory is correct, it may follow that the only long-term solution to the aforesaid ecological crises is a radical restructuring of society itself. But is it correct? While this thesis does not seek to examine

every claim made to justify the theory of Social Ecology, it can give particular attention to Bookchin's use of anthropological evidence, such as his interpretations of ethnographic accounts of non-western societies.

Social Ecology & Bookchin's Intent

Writing primarily during the 1970's and 1980's, Bookchin published over 20 titles. His work focused on large-scale environmental degradation and its relation to hierarchical human social organization across time. Born to a Marxist household, Bookchin was disenchanted by Stalinism early in his life and experienced an increased attraction towards social anarchism. He would ultimately hope to synthesize both Marxist and anarchist ideologies with the environmental movement in his theory of Social Ecology. Bookchin was particularly prescient in his speculations on the disasters that would be caused by large-scale environmental degradation, publishing six months before Rachel Carson's *Silent Spring* (1962) - a key inspiration to the environmental movement. The primary difference between their respective works was Bookchin's focus on not only a descriptive analysis, but a prescriptive praxis intended to reconcile human-to-human and human-to-ecology relations.

Bookchin's prescriptive theorizing culminated in his 1982 magnum opus, *The Ecology of Freedom: The Emergence and Dissolution of Hierarchy*. In *The Ecology of Freedom*, Bookchin proposes that "the very notion of the domination of nature by man stems from the very real domination of human by human" (Bookchin 2005: 65) This is

the linchpin of Bookchin's critique. By Bookchin's reckoning, the only way to

enduringly address ecological collapse would be to address the institutionalized,

hierarchical social relations that have led to domination and inequality among humans.

For example, institutionalized gerontocratic and patriarchal organizations, for Bookchin,

are at the roots of human social oppression, and play a more fundamental role than either

capitalism, white supremacy, or the nation-state itself - which are taken to be symptoms.

Bookchin's primary goal was to devise a descriptive and prescriptive framework that

could guide the construction of a "rational ecological society": A society liberated from

hierarchical relations and the resulting exploitation and domination of nature (Bookchin

1990: 6).

In order to support his claims, Bookchin utilized philosophy, political theory,

history, anthropology, and ecology. As a new generation begins to critique Bookchin's

work, most if not all his original citations are now almost fifty years out of date - this is to

say nothing of the potential misuse or misunderstandings of the works he relied upon.

Renewed public interest signals a vital opportunity to modernize and re-examine Social

Ecology's understanding of anthropology. An updated ethnographic record, and the

contemporary understandings thereof, will allow for an appraisal of Bookchin's ideas that

will necessarily provide critique and/or validation. Doing so will either strengthen or

weaken Bookchin's contribution and the extent to which Social Ecology theory ought to

be treated as a serious source of explanations of (or solutions to) ecological collapse.

Purpose of Thesis: Defining Terms

This thesis will serve as an initial attempt to elaborate on a number of interrelated subjects. Due to limits of space and time, focus is placed on the potential of social organizations to incorporate an egalitarian ethos - future research will question if equitable societies are in fact better equipped to respond to climate catastrophe. Chapters therein are summarized here. Chapter 2 offers an overview of the ways in which hierarchy and heterarchy (organizations that are unranked or possess the potential to be ranked a number of different ways) interact within socially and ecologically complex systems (Costa et al. 2008; Crumley 2007). Evaluating the relationship between hierarchy and heterarchy anticipates Bookchin's interpretation of humanity's place within ecology generally, while providing important context for contemporary anthropological study. Chapter 3 examines Bookchin's grand narrative of human social development and will critique his reliance on anthropological evidence. Critique will be limited to *The Ecology of Freedom*'s first three chapters.

Chapter 4 utilizes the previous critique in the hopes of producing new anthropological support for Social Ecology. In order to begin again, Bookchin's Social Ecology and anthropology generally, must firmly dispel Rousseau's romanticism and Hobbes' cynicism. Anthropology has made great strides in recent decades to correct idealized misrepresentation of egalitarianism, much of which traces back to these Enlightenment thinkers. Christopher Boehm's *Hierarchy in the Forest* (2001) provides a detailed survey of different societies and the many strategies used to maintain egalitarian,

or egalitarian-like, social relations. Boehm contributes key theoretical concepts such as Ambivalence Theory, "intentional-moral communities" and the "constellation of values" that organize the egalitarian ethos (Boehm: 8, 66).

Chapter 5 intends to briefly review how climate catastrophe is both a reaction to human social organization as well as an impetus to re-evaluate and alter how our societies relate. Accuracy in mapping of social possibilities allows for more reliable navigation of future terra-incognita produced by climate catastrophe. Alongside newly integrated human social evolution theory, analyzing practical methods for moderating or circumscribing hierarchy are necessary to build where Bookchin concluded.

Chapter II: Hierarchy & Heterarchy, Synthesized

Heterarchy, A Missing Antithesis

Before examining the work of Bookchin, it is necessary to contextualize his later dialectical argument about the relationship between hierarchy and "freedom" in human social organizations. Contemporary efforts in archaeological and ethnographic analysis have enabled more detailed accounting of social organization flexibility. *The Ecology of Freedom* (1982) was written over forty years ago, and before addressing his use of anthropology it is important to first review some of the various ways in which the discipline (including subdisciplines; archaeology and biophysical) has been updated, corrected, and how anthropologists may or may not rely on dialectical oriented analysis. This introductory review allows the reader to anticipate certain elements of the following critique. No culture or society is fully dominated or egalitarian, hierarchy and freedom are deeply entangled in the expressions of social organizations. Strict dichotomies of either/or opposition have limited the scope in which this process and its components are accurately observed.

Ecosystems and human societies are complex systems, systems in which multiple constituent parts interact, and in which the whole is greater than the sum of its parts (Costa et al. 2008; Crumley 2007). Crumley (2007) suggests that human organization, in terms of adaptability and interactivity, is "arguably the most complex category of self-organizing system known" (p. 3). How these complex systems interact have traditionally been studied under a hierarchical bias, a bias that considers constituents within systems to

be subordinated to others and may be subject to rank (Crumley 1995). Hierarchy in this sense has been used as a metaphor or synonym for order and complexity; that hierarchy is natural, without hierarchy there is disorder, simplicity should be expected.

This bias has effectively misinterpreted many systems, both ecologically and socially, that are not organized in a clearly delineated hierarchy. Processual archaeology, the predominant paradigm of the 1960's (see: Binford, Flannery), was considered to be a predictive science based in mathematics and philosophy (Crumley 2005). Critical readers have suggested this model is overly mechanistic, unilinear, deterministic, and is unable to adequately model human agency, social diversity, and societal change over time (Crumley 2005). Notable assumptions include; "simple" to complex linear progression (Fried's (1967) egalitarian-ranked-hierarchical and Service's (1962) band-tribe-chiefdom-state typologies (i.e., neoevolutionism)), more hierarchical societies are more stable, and power is exclusive to elites. Rather than treat contrary archaeological and ethnographic evidence as anomalous, contemporary anthropology seeks a methodology that can accurately interpret the complexity of all societies, flexibility and stability in non-hierarchical social arrangements, and collective sharing of power. Perhaps exceptions to the rules indicate a rule of only exceptions. How might contemporary anthropology broaden engagement with societies that seemingly break these categories, solidify the shift from typological determinism, and embrace a "both/and" model?

Heterarchy ("different rule") is a concept that has been proposed as a complement to hierarchy (Crumley 2005). Heterarchy is defined as, "the relation of elements to one

another when they are unranked or when they possess the potential for being ranked in a number of different ways" (Crumley 2005: 39). Heterarchy as a framework was introduced by research into the cognitive structure of the human brain, which illustrated that organization within the brain is not hierarchical but recalibrates ranking of its value as conditions fluctuate (Crumley 2007). Hierarchical bias interprets phenomena as occurring from vertical, top-down interactions, whereas heterarchy accounts for order in complex systems as emergent in "peer-to-peer" self-organization occurring from horizontal and bottom-up interactions.

Self-organization is defined as an, "emergence of [spontaneous] order at a global scale by simple local interactions between components of a system. Decisions throughout the evolution of a self-organizing system are made in a decentralized manner and in the absence of any external directive forces" (Vujovic et al. 2022: 2). "Order out of chaos" is an organizing principle found throughout evolution: the morphogenesis of an individual cell or an organism, mycelia networks, honeybee swarms, schools of fish, starling murmurations, and animal herds. Just as these organizations recalibrate to circumstances, heterarchy-hierarchy allows fluid adaptation within the spectrum of heterarchical-hierarchical organization.

Heterarchy assists in reconciling potential dichotomies (simple-complex, randomness-order, egalitarian-hierarchical) by placing them in synthetic dialogue together, allowing for a more complete understanding of the free-association and spontaneous order of complex systems (Crumley 1995). Hierarchical emphasis on

structure is broadened by heterarchical attention to the relationships therein. Cumming (2016) relays, "flexibility and adaptability are expected to be highest in a less hierarchical, more reticulated heterarchy; but excessive connectivity can reduce innovation. Resilience in social–ecological networks is likewise predicted to be highest at intermediate levels of network connectivity" (p. 629). When heterarchy-hierarchy frameworks are used as a continuum, the "intermediate", allows for a more holistic understanding of complex systems of ecologies, social organization and how the two interact (Cumming 2016).

Relationships within complex systems exhibit particular properties including nonlinearity, emergence, interdependence (mutualism), self-organization, adaptivity, dynamism, and feedback loops (Bar-Yam 2002; Crumley 2005). Because of these properties, complex systems are inherently difficult to model. Difficulty in modeling may be exacerbated by representations built upon strict dichotomies and neo-evolutionary typologies. Heterarchy is the first encounter with the potential insufficiency of the traditional anthropological use of egalitarianism to describe social organizations (i.e., equality amongst adult males of the group). Egalitarian values can pervade principally heterarchical social systems, but egalitarianism tends to oversimplify sophisticated and socially complex systems that are subject to flux, equifinality (ends can be reached by many potential means), and cut across traditional typologies associated with egalitarianism (i.e., band, tribe). Egalitarian values can "elude hierarchical institutions and operate beyond and within their boundaries" (Crumley 2005: 48). Egalitarianism can

even coexist with material inequality when social equality is actively managed (Rosenberg & Rocek 2019).

Modern anthropology is positioned to reject neo-evolutionary typologies and embrace theoretical models that are flexible, non-deterministic, dialectical and are compatible with studying complex ecosystems. In this sense, diversity amongst and within human societies parallels biological biodiversity (Crumley 2007). Inclusive societies tend toward a diversity of thought and a relative increase in alternative ways of considering solutions to issues that arise (Crumley 2005). Much like the human brain, flexible social organization allows for adaptability and resilience to changing circumstances, such as biodiversity loss and the corresponding reduction in human welfare. As mentioned above, hierarchical bias is reflected in traditional notions of progress in how societies change over time. Use of "collapse" and "decline" may in-fact indicate acts of revolt and resistance from the subaltern. Heterarchical and self-organizational principles, if seized and put into deliberate action, could provide social organizations a foundation for addressing both social inequality and climate disaster. The following subsections hope to investigate how these principles may or may not have basis in the evolution of primate social behaviors and the archaeological evidence of urban heterarchy in human social organization.

Primate Behaviors

Anthropogenic deforestation and habitat destruction threaten 54% of the global non-human primate population with extinction (Graham et al. 2016). Humans' closest living relatives are intelligent, social animals that provide an evolutionary window into understanding human social arrangements. Highly variable in their social behaviors, non-human primates are comparable to the plasticity and diversity of human social organizations. Strier (2017), "explores the diverse behavioral possibilities that are now known to exist among primates, and emphasizes the importance of preserving this diversity in the twenty-first century" (p. 25). Potential extinction of non-human primate species represents a dramatic reduction of invaluable insights into the effects of biodiversity and social evolution in the human lineage. Strier's (2017) fieldwork with muriquis monkeys forced her to question presumptions about primate hierarchy, "had muriquis turned the evolutionary and ecological rules that predict competitive behavior in other primates to different ends? Or, did they represent just one example of a previously underestimated set of behavioral options available to primates?" (p. 25).

Primate societies are generally referred to as either "egalitarian" or "despotic" (Tombak et al. 2019). Primates categorized as egalitarian include muriquis, red-colobus monkeys, langurs, macaques - female to female relationships within these groups are particularly non-hierarchical (Strier 2017; Tombak et al. 2019). Egalitarian classifications are contentious however, in that primate social organization is complex, and there are no "true egalitarian" primates. Nepotism, weak or undetectable hierarchies, aggression

levels, kinship affiliation, and coalitionary support, all contribute to complex

arrangements that are not easily categorized as "egalitarian" (Tombak et al. 2019).

Primate societies that exhibit degrees of egalitarian relations are perhaps better

understood in their "egalitarian societies showed more variation, both in reciprocity and

in the factors that influenced their social interactions, which included despotic social

drivers (dominance and kinship). In striking contrast, despotic species seem to be

restricted to dominance ranks and kinship as the predominant factors structuring their

social networks" (Tombak et al. 2019: 195). Degrees of egalitarian relations contribute to

the flexibility and diversity of social organization that are restricted under otherwise

despotic species.

Rather than classify primate species as entirely egalitarian or not, a more effective

descriptor of particular primate behaviors may be heterarchical with degrees of

egalitarian behaviors. Competitive hierarchies exist in chimpanzee societies, although

alpha male chimps are both dependent on cooperative male coalitions to support their

hierarchical status and also subject to being regularly undermined by these same males

(Strier 2017). Reciprocal alliances have been observed in unrelated, lower-ranking male

baboons successfully challenging their particular group's alpha male dominance -

mutualistic consideration of status is a potential explanation for these alliances that

benefit deposing the current alpha male (Strier 2017). Primate cooperation is also seen in

polyspecific associations: flexible, inter-group partnerships that form between several

species (Strier 2017). A mixed-species association may form amongst several groups that travel, forage, and protect from predation together.

Robert Sapolsky's work with the "Forest Troop" of baboons is a stark example of how flexible primates are in their social arrangements (Sapolsky & Share 2004). Dominant males of the "Forest Troop" had discovered a human garbage dump, which was aggressively protected from subordinates accessing refuse. Aggressive dominant males (roughly half of the males of "Forest Troop") were exposed to tuberculosis from the refuse, and would later die. Tuberculosis exposure dramatically altered the social structure of the "Forest Troop". Later observations showed that although dominance hierarchy had persisted, newer male transfers were not met with the aggression typical of high ranking male baboons. Instead, the "Forest Troop" tested lower for stress hormones, signaling that the post-tuberculosis social arrangement had been transmitted to newly joined males by existing female baboons. Sapolsky's study illustrated baboon social flexibility compared to what has traditionally been understood as hardwired hierarchical behavior, as well as the ability for existing members to transmit more passive relations to new adolescent males (Sapolsky & Share 2004).

Fission-fusion patterns also contribute to the flexibility of primate social behaviors. Fission-fusion can occur for a number of reasons including access to food and mates, demographic changes, predation risks, and seasonal changes - fission-fusion may occur on a daily basis (Strier 2017). Due to fluctuations in the daily social arrangements, characterizing primate egalitarianism or hierarchies is only descriptive of especially

particular circumstances and long-term behaviors can be difficult to categorize. Strier

(2017) notes, "fission-fusion societies… have few opportunities to establish and maintain

stable dominance hierarchies or affiliative alliances with one another, and presumably,

derive few benefits from doing so" (p. 211). Primate social behaviors are the second

encounter with egalitarianism - used as a typology of social organization, rather than a

descriptor of particular behaviors within a dynamic society - that further calls into

question its traditional anthropological use. Employing a heterarchical-hierarchical

dialectic, rather than a egalitarian-hierarchical binary, creates space to acknowledge and

appreciate the spectrum of primate social behavior and how these nascent behaviors are

analogous to styles of human social organization (Bondarenko 2007).

Off the Beaten Path: Heterarchical Archaeology

Contemporary archaeology has begun to reevaluate traditional assumptions:

"simple" to complex typologies, societies that are more hierarchical are more stable, and

power elite theories (Crumley 2005; Green 2018; Marquardt et al. 2022; Ortmann &

Kidder 2012; Thompson et al. 2022). Archaeological evidence that was previously found

to be anomalous or contrary to expectations is now leading researchers to employ

heterarchical methodology that can more accurately interpret the complexity of all

societies, flexibility and stability in non-hierarchical social arrangements, and collective

rule. Societies that have eluded traditional categories hold potential to expand, and

contribute to, the diverse spectrum of human social arrangements. Although there are

many sites to examine from a heterarchical perspective, this survey of exceptional archaeological sites is limited to Poverty Point, Louisiana, the Calusa culture of Southwestern Florida, Mohenjo-Daro, Pakistan, and the Muskogean culture of Cold Springs, Georgia.

Foraging societies have traditionally been associated with simplistic social organization; small-scale, relative social equality, little socio-economic specialization, and geographically isolated or limited (Ortmann & Kidder 2012). By these assumptions, monumental architecture has been understood to be evidence of hierarchical authority over a coerced labor force, foraging societies and large-scale cooperation were considered mutually exclusive. Archaeological evidence at Poverty Point (~4kya) calls these assumptions into question. Poverty Point culture was a conglomerate of foraging groups that practiced monumental mound building over a roughly five hundred year period. Mound A at Poverty Point, was "among the largest pre-Columbian architectural features in eastern North America", a temporal and spatial feat (Ortmann & Kidder 2012: 66). Rapid construction of Mound A ("approximately ninety days or fewer") was dependent on substantial long-distance trade and completed by a sizable labor pool that subsisted on a forager diet of hunting, gathering, and fishing (Ortmann & Kidder 2012: 66).

Small-scale, "simple" societies would not be expected to associate in such large numbers, however integrated cooperative labor was capable of the "well planned and organized" construction necessary to create Mound A (Bird et al. 2019; Ortmann &

Kidder 2012: 78). Poverty Point presents mobilized labor and large-scale cooperation organized by leadership that was circumstantial, temporary, and rotational. Large-scale actions can be self-organized by social norms based on mutual interest, reciprocity, group reputation, relational wealth, and risk buffering institutions (Glowacki & Lew-Levy 2022). Prosocial norms are developed from an early age in foraging groups such as the Tanzanian Hadza, Kalahari San, and Canadian Inuit. These norms set a foundation for cooperative behavior which can be lifesaving in times of scarcity and need (Glowacki & Lew-Levy 2022).

Construction of Mound A suggests that "simple", small-scale societies may have functioned as complex social organizations, rather than as the precursors to complex social organizations. Local foraging societies were capable of organizing as a regional, large-scale aggregate to construct complex public works, such as architectural monuments, enough so that to consider any foraging society as "small-scale" would be inaccurate (Bird et al. 2019). Bird et al. (2019) suggest "foragers do not live in small-scale societies" as such, however it could be added that small foraging communities are embedded in larger decentralized social networks. For instance, evidence of ostrich eggshell beads, dating back 50,000 years, illustrates a substantial social network that covered over 3,000 kilometers across Eastern and Southern Africa (Miller & Wang 2021). Heterarchical interpretation of sites like Poverty Point assists in reconciling previous hierarchical assumptions. All societies are complex, interactive, and fluid in

their movement between small and large-scale cooperation without necessarily requiring hierarchical coercion.

Social stability has traditionally been associated with hierarchical societies, although hyper consolidation of power decreases the ability to adjust to fluctuating and unexpected circumstances (Crumley 2015). Hierarchical and heterachical social organizations come with tradeoffs: heterarchies can reflect consensus while consensus may be slow to build, and hierarchies can effectively address emergencies although decisions may be unpopular and require coercion (Crumley 2015). Notably the Calusa fishing culture of pre-Columbian Southwestern Florida had operationalized this heterarchical-hierarchical flux into their social organization over long periods of time. Calusa polities, that had been developed around cooperative and heterarchical relations, began to transition into more hierarchical social relations around 950 CE (Marquardt et al. 2022). Fishing production was increased in this later time through engineered "holding pond" infrastructure. Times of resource scarcity (low water levels or smaller fisheries) however, saw a return to cooperative and heterarchical relations characterized by earlier periods.

Calusa society is difficult to compare to other socio-political arrangements, the Northwest Coast societies of North America is one of a few exceptions. These societies controlled large territories, captured and held slaves, subsisted primarily on fishing and foraging, and had intricate social ranking (Marquardt et al. 2022). Calusa social relations, either more or less hierarchical and heterarchical, fluctuated alongside their environment.

Marquardt et al. (2022) suggest that Calusa exhibits "episodic complexity", that in order to adapt to local climate change, social organization reflected hierarchy in times of abundance and heterarchy during periods of scarcity. Aquatic resources and coastal lands available for occupation would have been intermittently affected by climate disturbances and Calusa organization was flexible enough to adjust to new needs. Calusa imparts that power is relational and subject to pressure from leaders, commoners, and a dynamic environment. Long term stability of the Calusa was achieved by a flexible social organization that could rapidly address changing necessities from heterarchical and hierarchical frameworks.

Because of archaeology's historical bias towards hierarchy (particularly in understanding urban societies), power is traditionally looked for, and found in political and economic elites. This emphasis implicitly suggests that without a hierarchical elite, there would be no social complexity (Green 2021). Markers for complex societies have historically included, "large-scale architecture and sophisticated early technologies - writing, metallurgy, weights and measures, and seals", all of which are demonstrated at the Mohenjo-Daro site (Green 2021: 154). Recent archaeological research into the Indus civilization and Mohenjo-Daro have been unable to find evidence that would suggest socio-politico-economic inequality or a ruling class. "It is evident that palaces, elaborate tombs, and individual-aggrandizing monuments are not present at Indus sites", Mohenjo-Daro is rather defined by its relative egalitarian relations (Green 2021: 182).

Evidence suggests that Indus cities emerged from a preconditional egalitarianism fostered in previous collective settlements and large-scale group architecture (Green 2021). Pre-city settlements exhibited specialized production, structurally differentiated neighborhoods, and animal domesticates (Green 2021). Social complexity and collective cooperation are not solely the products of coercive ruling elites, but have the potential to be born out of decentralized egalitarian social values. For instance, maintenance of emerging Indus city infrastructure was a potentially unpleasant task (i.e., sewage drainage), this may have been mitigated through collective "scheduling, task rotation, and lotteries to name a few" (Green 2021: 170). In the case of Mohenjo-Daro, heterarchical dynamics contribute to consensus building, large-scale cooperation, and social complexity. Egalitarianism at Mohenjo-Daro, which was once unaccounted for, can now be situated in a heterarchical social organization that operated independent of a power elite (Green 2021).

Recent archaeological work in the Southeastern United States has elaborated on pre-colonial democratic institutions. Thompson et al. (2022) examine construction and maintenance of Muskogean council houses at the Cold Springs site in Georgia, roughly dating from 500 AD and lasting well into the 1700's. Early archaeological interpretations of sites like Cold Springs tended towards neo-evolutionary assumptions of hierarchy and "chiefly" social arrangements. In re-evaluating Cold Springs, Thompson et al. (2022) suggest that neo-evolutionary theory has misinterpreted archaeological remains of council houses, rather they were physical embodiments of institutions which emphasized

collective governance, consensus, and inclusivity. San Luis de Talimali, in northern Florida, is the largest known council house and would have been capable of holding thousands of people at a given time (Thompson et al. 2022). Buildings of this size would have required specialized labor and are typically built in circular fashion, an architectural design that facilitates cooperation. This building design has prompted archaeologists to reconsider large circular post patterns at Poverty Point as potential council house sites, potentially pushing back the council house building pattern thousands of years (Thompson et al. 2022).

Although democratic institutions are difficult to maintain, council houses existed as an enduring feature of Muskogean culture for roughly 1,500 years. Material institutionalization of council houses was superimposed over existing social institutions (clans, lineages, etc.), acting as public meeting spaces which supported free discussion, debate, and consensus building (Thompson et al. 2022). Collective governance amongst dispersed families and clans also had an ecological component in the disputes over land access and common-pool resources. Council houses allowed for decision making that centered ecosystem management and group cooperation (Thompson et al. 2022). Democratic institutions like council houses provide collective counter-power ("checks and balances") to individuals seeking hierarchical positions.

Neo-evolutionary typologies have led to the denial of complexity and agency in non-Western cultures. Thompson et al. (2022) note that Western ideals of democracy have been centered around the American Revolution and ancient Athens - both of which

were "highly exclusionary" (p. 2) (see Holland-Lulewicz et al. 2022). Democratic idealism has over-shadowed actual indigenous institutions that encouraged governance based on cooperation and inclusivity. Neo-evolutionary frameworks contain implicit determinism which suggests that group cooperation cannot scale under egalitarian social arrangements, that complex societies develop under dominance and coercion. Complexity of cultures such as the Muskogee are not fully understood by the term "egalitarian", which itself may be a typological remnant of neo-evolutionism (Thompson et al. 2022). Thompson et al. (2022) suggest that Muskogee political sophistication is best explained as egalitarian values within democratic institutions.

Poverty Point, Louisiana, the Calusa culture of South Florida, Mohenjo-Daro, Pakistan, and the Muskogean culture at Cold Springs, Georgia all contribute to an expanded spectrum of possible ways to organize socially. Contemporary archaeology is now able to distinguish these societies as unique social collaborations in which all social groups are complex, non- hierarchical associations can be flexible and stable, and there is potential for self-determined collective rule. Societies and archaeological sites that were once anomalous or overlooked now hold the potential to expand current understanding of socio-political possibility.

Egalitarianism, used as an evolutionary type that emphasizes small-scale, "simple" societies is insufficient to describe these examples of urban heterarchy. In 1973 economist E.F. Schumacher put forth the sustainability maxim, "small is beautiful." Heterarchical urbanism however suggests that "intimate is beautiful", that scale and

political effectiveness are not necessarily mutually exclusive as has been traditionally proposed. Heterarchy has become an important framework for which to describe non-linear, self-organized power built around collectively practiced egalitarian values. This chapter provides important context for the following critical reading of Bookchin and his reliance on dialectical interpretation of egalitarianism and hierarchy in human social development.

Chapter III - A Critical Reading of Bookchin

Introduction to *The Ecology of Freedom*

The Ecology of Freedom (originally published in 1982, reprinted 2005) provides Bookchin's most detailed argument for prehistoric egalitarianism and the successive, incremental institutionalization of hierarchical social relations. Focus will be given primarily to the first three chapters due to their reliance on relevant anthropology and ethnography as supporting evidence. Following this overview will be a critique of Bookchin's thought and process as a means of providing Social Ecology an opportunity to be updated and revised with modern ethnographic analyses. Although much of his anthropological assumptions are necessarily obsolete, focus will be placed on examining the cultural methods that may or may not be effective in reconfiguring hierarchical relations and the extent to which Bookchin's interpretations of these practices are defensible. *The Ecology of Freedom's* limited citations may call into question his original use of ethnographic evidence. Bookchin's terminology is often idiosyncratic and phrases of key importance will be italicized in order to draw attention to his particular perspective. Bookchin's basic worldview will be followed by an analysis of ethnographic references.

Bookchin suggests that hierarchy and egalitarianism ("freedom" is used as a synonym for egalitarianism throughout) should be understood through a dialectical framework. With this assumption, no society is fully dominated or egalitarian, hierarchy

and freedom are deeply entangled in an ongoing process of interaction, existing in dialogue. Power exercised in social groups is inevitable, but how that power is organized, is not. That is to say that expressions of hierarchy and egalitarianism are both natural but the circumstances that will generate and sustain either are complex. Bookchin's narrative of human social development attempts to contextualize this movement between egalitarianism and hierarchy.

For Bookchin, modern society is inflexibly hierarchical, guided by a "grow or die" capitalist imperative, and is actively undermining and simplifying the biologically complex foundations of human existence (Bookchin 2005:13). Modern society has embodied a hierarchical bias into its very essence, "hierarchy is not merely a social condition; it is also a state of consciousness" (Bookchin 2005: 69). Ecological destruction finds its origin in, "this social system…that has projected the domination of humans by humans into an ideology that [humanity] is destined to dominate Nature" (Bookchin 2005:16). Paradoxically, "modern [human] capacity for destruction is evidence of humanity's capacity for restoration" (Bookchin 2005: 83).

Far from the "immanent certainty" suggested by Marxist teleology, the survival of the human species is increasingly uncertain despite this potential. Traditional single-issue reforms have been capable of only addressing symptoms of social and ecological crises, Bookchin hopes to offer Social Ecology as a radical, comprehensive theory to understand and address the root cause. Hierarchical critique attempts to look beyond capitalism, white supremacy, or the nation-state itself. Important to Social Ecology theory is the

history of human social organization as documented in archaeological and ethnographic literature.

Humans and human societies are products of evolution and are materially dependent on non-human nature, an ecological community of necessity. Pristine, untouched "wilderness" is little more than colonial fantasy, "not only does humanity place its imprint on the natural world and transform it, but also nature places its imprint on the human world and transforms it" (Bookchin 2005: 97). Because humans are embedded in ecologies, Bookchin sees societies as active forces with the potential to act rationally in the world, and enhance or actively undermine evolution's drive towards "ever-greater differentiation" (Bookchin 2022: 13). In this sense, "nearly every ecological issue is also a social issue" (Bookchin 2005: 32). Ecological problems have been *de-socialized* when human impact is viewed as undifferentiated, such as when there is equal ecological burden assumed of both, "starving Ethiopian children or corporate barons" (Bookchin 2005: 33). *De-socializing* ecological problems serves to obfuscate hierarchical social relations.

In order to appreciate modern hierarchical society, Bookchin crafts a history of alternative human social organization. He asserts that early humans were oral ("preliterate") egalitarian societies; this "original" social structure was *organic*. *Organic societies* (i.e., "state of nature") institutionalized non-hierarchical relations; *differentiation* (i.e., "otherness", "biodiversity") amongst members was *complementary* and mutualistic. *Complementary* relations are calibrated to natural inequities in physical

differences, degrees of intellectuality, and needs among individuals. Bookchin finds

several fundamental practical qualities of *organic society*; an *irreducible minimum*

(provisioning of all of the basic means of life)*, equality of unequals* (counterbalancing of

natural inequalities), *usufructian property* ("ownership for duration of use"), and an

ethics of *complementarity* (mutualistic interdependence) (Bookchin 2005: 55-56).

Hierarchical societies would develop out of and subsume *organic* organization,

complementary differentiation became the basis for differential ranked status. What in

organic societies had been *complementary* identities (i.e., age, gender, kinship ties,

physical ability, etc.) "were soon institutionalized into hierarchical gerontocracies,

patriarchies, and military fraternities" (Bookchin 2005: 26). "The emergence of

hierarchy" was built upon preexisting *complementary* social relations and

misappropriated by "command-and-obey" relationships (Bookchin 2005: 26).

"Gradually…primal unity began to break down…unevenly and erratically, shifting back

and forth over long periods of time" (Bookchin 2005: 69-70). Hierarchical relations

inverted the *organic*: "obedience displaces allegiance, command displaces giving, power

displaces wisdom, acquisition displaces giving, commodities displace gifts" (Bookchin

2005: 122).

Social Ecology is underpinned by a dialectical philosophy that calibrates towards,

"achieving *wholeness* by means of a *unity in diversity*…that intertwines a legacy of

freedom and a legacy of domination" creating a "double-helix" (Bookchin 2005: 11-12).

Bookchin strove to move beyond what he felt were the insufficiencies of Hegel's idealist

dialectics and Marx and Engels' dialectical materialism, effectively unifying dialectics with a *philosophia naturalis* that traces back to Aristotle. Dialectics, as a *unity* in *diversity*, is philosophically ecological in its outlook - Hegel's famous metaphor, "the bud disappears in the bursting-forth of the blossom", makes this clear (Bookchin 2005: 96).

To potentially reverse ecological devastation, humanity should consider the world, not only as it is but as it should be, and seek the creation of *rational ecological societies* and bioregional *eco-communities*. Ecological and social instability calls for participatory societies that do not, "return to aboriginal lifeways…but enrich [society] by the insights, knowledge, and data acquired", over human history (Bookchin 2005: 60). A society that has dismantled hierarchy amongst humanity and between nature necessitates an "ecology of freedom". As Bookchin reminds, "we not only share a common history with nature…but also a common destiny" (Bookchin 2005: 99). To remain idle would be, "misanthropic…nature has given its creativity, fecundity, growing subjectivity, and capacity for innovation", and it is deserving of human respect (Bookchin 2005: 52). Respect is realized in the human ability to improve society and ecological relationships for the better.

The Anthropology of *The Ecology of Freedom*

Organic society was Bookchin's framework for generalizing early egalitarian foraging societies. Organized around internal social, and external ecological solidarity, *organic societies* emphasized that individuality and autonomy were based in interdependence rather than independence. Although *organic societies* had been

historically marginalized by the "emergence of hierarchy", Bookchin felt that there were extant societies ("surviving *organic societies*") that continued to embody these social principles (Bookchin 2005: 116).

Dorothy Lee's (1959) work with Wintu tribes (Southern California) is invoked as an example of a society that embeds egalitarian values into their spoken language. "A chief does not 'rule' his people; he stands with them. The phrase, 'to live with' implies not only a deep sense of mutual respect for a person and a high regard for individual voluntarism; it also implies a profound sense of unity between the individual and the group" (Bookchin 2005: 111). Bookchin also saw this drive towards freedom emphasized in Dorothy Eggan's (1970) study of Hopi childhood. Hopi culture (American Southwest) emphasized interdependence learned during adolescence. Hopi practiced weaning from breastmilk as symbolic transference from singular to communal supported nourishment (Bookchin 2005: 111).

He felt that this in-group psychic unity was facilitated through magic ritual. Ceremony promoted social solidarity and ecological harmony: *organic society* self-identified as an animistic *ecocommunity* that extended beyond human relations but to nature; "animals, forest, soil" communities (Bookchin 2005: 112). Hopi culture, primarily horticulturalists, employed ceremony as a means of participating in seasonal cycles. In this sense, humans play a complementary role in facilitating "cosmic order" and Hopi members were integrated citizens in the "complex web of life" (Bookchin 2005: 112). Ritual in *organic societies*, Hopi ceremony specifically, seek to *socialize* the ecosystems

they inhabit - nature is made fictive kin. Bookchin sees a similar process occurring with the Efé and Mbuti pygmies of the Ituri Rainforest (Congo) in their self-identification as "children of the forest" ("ndura") (Bookchin 2005: 112). Another example given is the Algonquian people find totemic kinship in their clan affiliation (i.e., beaver clan). Bookchin references indigenous use of fire to revitalize land, plant, and animal communities throughout these chapters.

Organic societies practice communalist property relations based on the principle of *usufruct*, "the freedom of individuals in a community to appropriate resources merely by virtue of the fact that they are using them… Need now emerges as an ordering and structuring force" (Bookchin 2005: 116-118). This is in contrast to historical Western property relations based in *abusus* ("right to sell, give, or destroy property"). *Usufruct* rejects private property and embraces a reciprocal appropriation of public resources, in this sense *usufruct* operates as an internal gift-giving practice that actively resists private accumulation of resources. Bookchin recognizes that potlatch ceremonies are a conflicting example of resource redistribution that can also lead to personal aggrandizement and prestige hierarchies (Bookchin 2005: 117).

Complementarity in *organic societies* provided women social equity with men that would be lost to later emergent hierarchies. Bookchin recognizes this mutual dynamic as evidenced in gendered labor (i.e., hunting and foraging). Women were the biosocial nucleus of local and extended kinship blood-ties, ancestors, local community members, and regional associations (Bookchin 2005: 120). In this sense, biological social

affiliation (domestic kinship) is foundational for civil social affiliation. Bookchin suggests that this progressive split was propelled by male hunters dominating the civil sphere and the subordination of women to domesticity. Prior to civil monopolization, leadership "[had] no true authority in a coercive sense", power was episodic and restricted to circumstances relevant to expertise (Bookchin 2005: 122). He speculates that women in *organic societies* held relative social prestige for their central role in horticulture, prestige gone unrecognized after the "emergence of hierarchy". From child rearing and kinship relations, to selective breeding and domestication of wild plants and animals, to pottery, textiles, and basket weaving, women tended to the literal and figurative roots of society and civilization.

Bookchin's "emergence of hierarchy" is thought of as an uneven development where once communal relations were supplanted by hierarchical consolidation: popular material production by elite control, kinship by incipient class relations, and popular assembly by bureaucracy. This conversion towards social domination was, "a precondition for the domination of nature by humanity" (Bookchin 2005: 134). "Socially induced scarcity" is countered by "freedom of choice", a free society based on wealth of culture rather than monopolized material wealth (Bookchin 2005: 137). Whereas *post-scarcity* (freedom from scarcity) is the objective of a *rational society*, scarcity is the product of social monopolies developed out of male elders, shamans, and warrior classes. Domestic labor was relegated to a diminished prestige below the male dominated civil sphere. Bookchin felt that men have, "the most to gain by the institutionalization of

society and the emergence of hierarchy", that this control over social power anticipates loss of biological power in old age (Bookchin 2005: 151).

Older community members are both a pillar of social longevity and a potential burden to group security (Bookchin 2005: 151). Senior members of oral cultures are important depositories and communicators of knowledge and life experience, assist in child rearing, and contribute to tool making and food collecting. Elderly members are particularly subject to physical frailty, sickness, and consistent support of their community. Anthropological literature contains examples of elderly members that were abandoned and even executed. Due to their precarious status, elder members began to institutionalize gerontocracy as a means of self-preservation (Bookchin 2005: 151). Bookchin felt that adolescent boys were subject to harsh initiation ceremonies as a means of associating pain and authority with senior members' status. Shamanism is a particular expression of patriarchal-gerontocratic hierarchy in which the supernatural is either wielded for or against members of the group - fear is an important element of accepting shaman authority.

The preceding subsections (3.1 and 3.2) are meant to detail Bookchin's thinking about social organization, dialectical movement between *organic societies* and emergent hierarchies, and his use of anthropological and ethnographic evidence to support his narrative of human social development. While these subsections are unable to outline every detail of his thought, they are meant to review the claims that are most relevant for re-evaluating in light of the advances made by contemporary anthropology. From

prehistoric social arrangements that were; *organic*, egalitarian, and free; to the

"emergence of hierarchy" and institutionalized domination; *The Ecology of Freedom* is

abundant with claims that are thought provoking, controversial, and necessarily outdated.

Subsection 3.3 is intended to critique the initial chapters of *The Ecology of Freedom* and

offer an updated anthropology that looks beyond the limited information set offered in

the above chapters.

No Gods No Masters: Critiquing Bookchin

At the time of writing *The Ecology of Freedom* (1982), Bookchin relied on what

was considered academically verified anthropological perspectives on early human social

organization. Consensus was reached during the *Man the Hunter* conference (1966) about

the nature of both modern and Pleistocene hunter-gatherer societies: small mobile-

hunting groups that were typically geographically isolated other than local kinship

networks, peaceful, egalitarian, discouraging of material accumulation, antagonistic to

displays of authority, and occupying marginal habitats. This common modeling of

hunter-gatherer society, the "nomadic-egalitarian model", was disputed throughout the

1980's and came to be known as the "Kalahari Debate". For both the researchers of these

academic discussions and Bookchin himself, the imagined state of early human groups

was not very different from Rousseau's romantic prehistory. A fall from the grace of

small band society was all but inevitable and humans were to be punished under

institutionalized hierarchies. Despite Bookchin's desire to craft a narrative of human

prehistory that stands apart from mainstream depictions, his lack of variety in ethnographic examples and over-generalized *organic societies* model tends to recast Edenic-style explanations for "the emergence of hierarchy".

Particularly relevant to Bookchin's Social Ecology, are two undercurrents developing within modern anthropology that may allow for a new synthesis of past and future possibilities of human social organization. First: the traditional classifications of hunter-gatherers (now foragers) have reached an important point of reconsideration. Modern foraging ethnographies are now more than 50 years out from *Man the Hunter* and are ready to shed light on potentially obsolete patterns of analysis. Traditional typologies, both deterministic and dated, have collapsed the spectrum of possible social arrangements and the complex circumstances they create and respond to. In light of the most recent ethnographic and archaeological evidence, anthropology must reclassify, or perhaps "de-classify", foraging groups relative to socio-political structure (i.e., hierarchical, egalitarian), group size and mobility (i.e., simple-complex; nomadic-sedentary), among other traditional categories (Singh & Glowacki 2022). Traditionally falling into either Hobbessian or Rousseauian camps, new findings illustrate the blade used to excavate the past, cuts in both directions.

Traditional modeling of foragers established at the *Man the Hunter* conference, can be summarized as the "nomadic-egalitarian model". A predominant pitfall of "nomadic-egalitarian" modeling, is in the extrapolation of extant foraging groups as representative of extinct paleolithic foraging groups. Modern foragers are as modern as

modern citizens of nation-states, contemporary foragers only approximate Pleistocene social arrangements. Evidence is in the process of being synthesized: foragers that were low-mobility and hierarchical, large-scale cooperative foraging networks, egalitarian urban settlements - all of which contradict traditional expectations regarding paleolithic foraging societies (Graber & Wengrow 2015; Singh & Glowacki 2022). There is also increased consideration of incipient animal and plant domestication which challenges the traditional dating of emergent agriculture in the Neolithic, which seems to suggest that horticulture and specialized cooking were practiced for much longer in human history than previously thought (Kabukcu et al. 2022; Singh & Glowacki 2022). Singh & Glowacki (2022) term this new modeling the "diverse histories model" which itself encapsulates the standard "nomadic-egalitarian model", only one out of many possible social outcomes.

Cost-benefit analyses of resource abundance effectively acts to encourage lower foraging mobility, larger group association, hierarchical social coordination, as well acting to pacify individuals from defecting to other resource locations (Singh & Glowacki 2022). Abundant aquatic resource sites have been traditionally overlooked as prime locations for foraging; coastal regions have been especially altered by rising sea levels relative to the Pleistocene. Before submerging, coastal and riparian ecoregions would have allowed for predictable accumulation of storable resources, particularly smoked fish (Graeber & Wengrow 2018; Singh & Glowacki 2022; Smith & Codding 2021). Storage of predictable resources allow for groups to adapt to sedentary, hierarchical and large-

scale population dynamics. This social organization is reflected in examples of the foraging Calusa (Southwest Florida) and Pacific Northwest Coast societies.

The second undercurrent: the necessity to reconsider, reimagine, and reconstruct human social groups in the face of catastrophic climate change. Graeber & Wengrow (2015) propose an emergent "paleolithic politics" that reflected the highly variable seasonal patterns of the Late Pleistocene. This model of "paleolithic politics" was represented by self-conscious social organization, reflecting the oscillation between seasonal resource availability. Seasonally varied political organization, realized in the expression of both hierarchical and egalitarian relations, further dismisses the traditional nomadic-egalitarian model. "Paleolithic politics" implicitly suggests that traditional categories of "simple or complex"; "egalitarian or hierarchical" and "sedentary or nomadic" produce determinist binaries that collapse the spectrum of self-conscious political arrangements and re-arrangements during the Late Pleistocene. Centripetal-centrifugal oscillation is also found in modern ethnographies including Pueblo, Inuit, Kwakiutl, and Great Plains societies (Graber & Wengrow 2015). Seasonal socio-political variation is fundamental to human evolution and can be found in the fission-fusion patterns of chimpanzees and bonobos (Graber & Wengrow 2015).

Graeber and Wengrow find an ethnographic tradition, initiated by Marcel Mauss (1925), Robert Lowie (1935), and Claude Levi-Strauss (1962), that places emphasis on seasonal variation and the associated self-conscious political structures. Among these scholars is a "use of ethnographic accounts not as proxies for particular stages of past life,

but rather as a source of insight into features of the human condition that might be considered of general evolutionary significance" (Graeber & Wengrow 2015: 603). Exhibited effectively by the Nambikwara (Brazil) chiefdom; reputation as chief was dependent on overseeing successful seasonal transitions from villages practicing horticulture to nomadic foraging bands (Graeber & Wengrow 2015).

Bookchin's understanding of women's role in society is potentially problematic. His characterization of strict sexual divisions of labor is undermined by ethnographic evidence. There are notable examples of women participating beyond the domestic sphere; Agta women in the Philippines using weapons to hunt, women of the Mbuti and Aka (Congo) assist in net hunting, and there are numerous cases in which women will hunt for small game and passively collect aquatic animal proteins (Boyd & Richerson 2022; Lombard & Kyriacou 2020). Reliable foraging of proteinaceous resources, rather than stochastic and prestige-oriented hunting, accounts for 60-80% of !Kung daily subsistence (Lombard & Kyriacou 2020). Children and elderly can both participate in foraging directly, while also supporting indirectly through alloparenting childcare (Lombard & Kyriacou 2020). New evidence from Shanidar Cave (Iraq) suggests that plants with toxic compounds (wild almonds, pulses, and mustards) were purposely chosen and intensively prepared for safe consumption (Kabukcu et al. 2022). Choice of potentially dangerous food resources and complex preparation practices used to create regional cuisines not only pushes back the intensification of plant resources some 30,000

years prior to Neolithic agriculture, but also inverts prevalence given to "man, the hunter" and intervenes popular ideas about a "paleolithic" diet.

Despite the important roles that women play in foraging societies (i.e., food collecting, "bearing and caring" for future generations, and crafting), "women's rights vary considerably in [foraging] societies, but when it comes to public power, we find that it is exerted by men almost uniformly" (Vandermassen 2008: 486). Even in egalitarian foraging societies, gender disparity affects public social status. Bookchin's characterization of *complementary* relations between men and women in public life does not reflect ethnographic evidence, but his focus on personal freedom and autonomy are indeed valued in societies like the !Kung (Vandermassen 2008). !Kung men discourage dominant behaviors, but this does not deny a first-among-equals dynamic with !Kung women. It is this status divide between public groups and private individuals that seems to pervade most egalitarian groups (Vandermassen 2008). Examples of men dominating the public sphere include arranged marriages that remove brides from their natal group and disrupts coalition building, capturing women as brides, domestic abuse, and honor killings (Vandermassen 2008). Perhaps Bookchin was correct in addressing male monopolization of the civic-public sphere, but was incorrect in his assumption that this dynamic was not always at play throughout human evolution and in otherwise egalitarian communities.

When engaging with Rousseauian-type thinking, the presentation of foraging peoples tends towards non-violent and peaceful (Hames 2019). Bookchin's "organic

societies" is an example of this idealist characterization, that organized violence is a product of later hierarchical development. Both the archaeological record and ethnographies of extant foragers dispel this notion, linear social development cannot be supported. As with a Hobbessian view, these traditional categories misrepresent the reality of foragers' lived experiences, which are not mechanically all-violent or all-peaceful. These out-of-date dualisms force reiterating the evident - Hames suggests, "from an evolutionary biological perspective, war and peace are simply human capacities that are elicited under specific conditions that we would like to understand more fully to promote peace" (Hames 2019: 13). Foraging peoples are rational in their risk-analysis and, depending on the circumstances, will act violently or peacefully and can both maintain or impede social cohesion (Hames 2019).

For Hames (2019), coalitionary violence is likely an inherited social trait that closely resembles our evolutionary heritage with genus *Pan*. Peaceful intragroup band relations, however, are an evolutionarily derived trait (Hames 2019). Ritual violence may have been used as a means of delineating group territory, as a leveling mechanism against despots, or simply as a means of animal-like exhibitions that all but avoid actual violence (Angelbeck & Grier 2012). As much as violence is a possibility, there are also regional band affiliations, as with the Gwi Bushmen (Kalahari Desert), that build cooperative tendencies through marriage, trade, visiting relatives, ceremonies, and sharing new information (Hames 2019). These comings and goings reflect a larger pattern of fission-

fusion throughout regional band affiliations that correspond to seasonal resource availability.

Over the course of this critique, it becomes clear that Bookchin was susceptible to Rousseauian-style projections onto historical peoples. With his "organic societies", an important question is provoked about the intentionality of non-western society's ecological relationships. Perhaps inadvertently, this follows the romanticized "ecologically noble savage" trope. Crumley reminds, "even old growth forests are not pristine; essentially all contemporary forests are the result of past and present human activity" (Crumley 2015: 9). Human impact on the environment is a given, but means and ends determine the quality of that relationship. "Ecologically noble savage" suggests pre-Columbian peoples were considered to have been practicing forms of systematic conservation of their environments (Hames 2007).

Despite not practicing conservationism - as defined by modern evolutionary ecologists and conservation biologists - native peoples traditionally "possess an extensive and deep understanding of their local ecosystems" (Hames 2007: 184). This is exemplified in the utilization of a broad spectrum of resources which necessarily lowers stress on the overuse of a select few. Other practices include the sustainable hunting of beaver by Algonquin (Great Lakes), and burning of grasslands by groups such as the Martu (Western Australia) and Sierra Miwok (California) to improve habitat quality (Hames 2007; Singh & Glowacki 2022). Despite the assumption that human populations

necessarily deplete their local ecosystems, grassland burnings actually increase resource productivity and general habitat enhancement (Bliege-Bird et al. 2020).

Other examples of resource management include, "New Guinea *Causirian* planting, Japanese post-Tokugawa reforestation, Tikopian pig prohibition, Polynesian control of reef fishing", and Yup'ik conservation of waterfowl (Hames 2007: 183). New evidence exhibits archaeological village sites in the Pacific Northwest which are associated with anthropogenic management of legacy "forest gardens" (Armstrong et al. 2021). These forest gardens were managed perennial fruit and nut trees, pollinator species, and human-constructed animal habitats. Forest gardens exhibit, "positive effects of Indigenous land use on contemporary functional and taxonomic diversity", groups maintained a productive impact on biodiversity (Armstrong et al. 2021: 1).

Even so, addressing the "ecologically noble savage" trope would have required Bookchin to address occurrences of "soil erosion, denitrification, salinization, and a variety of biotic resource overexploitation" (Hames 2007: 183). In order to acknowledge both practices of ecological sustainability and overexploitation of resources by non-western cultures, consideration must be given to how these groups do or do not self-identify with their ecological setting. This self-identification allows for a diversity of relationships, both ecologically beneficial and maladaptive, and rejects the "ecologically noble savage" trope.

Discourse around ethnographers' "emphasis and choice of data" and "value orientations" has been ongoing, particularly in relation to oral cultures (Bennett 1948:

366). Bennett relays one such example of the Hopi, particularly relevant to Bookchin, dating back some 75 years. Bookchin would have had information available to discuss or consider the contradictory evaluations of the Hopi, especially invoking their culture as an example of egalitarianism. (Specifically, some authors have emphasized the extent to which Hopi society oppressed individualism and freedom.) Despite the stark contrasts in interpretation of Hopi culture, it is important to consider that ethnographers have a quantum-like relation with the culture of their study. Depending on individual biases and predispositions, an ethnographer, inadvertently or with intention, participates in the outcome of examination. Further difficulty is introduced when the academic reader is not familiar with the historical literature of a particular culture - the reader is expected to give the writer's academic rigor the benefit of the doubt (Bennett 1948).

At least two important points can be gleaned from this. First, cultures are universal in their ambivalence and appear to resist rigid categorization. Ethnographic interpretation must allow for the inherent dialectical contradictions that all cultures embody. Secondly, isolated ethnographers are problematic if not altogether detrimental. Modern ethnographic studies reduce this potential harm through multidisciplinary evaluation. These points encourage a flexibility in the study of hierarchy and egalitarianism that Bookchin seems to have neglected, despite his own dialectical approach.

Bookchin's ideal "organic societies" are based on overly generalized social attributes of particular cultures and necessarily obscure the diversity of foraging peoples.

Diversity of foraging peoples ultimately disproves Bookchin's conceptions of prehistory; hierarchy and egalitarian ethos have always interacted to create unique social arrangements. This includes foragers like indigenous peoples of the Pacific Northwest Coast that were sedentary, hierarchical, practiced slavery, and lived in large-scale communities. His dialectical account of history seems to fall flat when it is embedded into a linear account of *organic societies* living freely and their eventual reconfiguration as relationships of domination. In this same way, Bookchin's dialectic that ecological problems are at their root caused by social problems, falls short against the emerging evidence of the Pleistocene. Many social arrangements were in fact responses to climate upheaval, that social problems and their respective adaptations can also arise from stochastic environmental changes.

Bookchin's emphasis on *irreducible minimum*, *equality of unequals*, *complementarity*, and *usufruct*, are less universal examples of prehistoric *organic societies* and more so components of his ideal political program. Rooting an argument in deep human prehistory adds a certain amount of weightiness, but for Bookchin this unfortunately culminates in a picture that has not held up against modern anthropology. Too often Bookchin positions himself antagonistically to academia, "anthropological etiquette requires that I occasionally sprinkle my remarks with usual caveats about my use of 'selective data', my proclivity for 'rampant speculation', and my 'normative interpretation', of disputable research materials" (Bookchin 2005: 123). Bookchin

preferred to have it both ways, dismissing academic anthropology while selectively relying on the discipline to craft his prehistoric narrative.

Bookchin's mix of both valuable reflection and insight with unsubstantiated conjecture produces a hesitancy in the critical reader, which is compounded by his glaring lack of citations. Anthropologists are not obligated to trade one problematic idea for another. Nor is there a requirement to throw out the entirety for instances of patchiness. As with Bookchin's emphasis on dialectical process - *The Ecology of Freedom* arrives to the contemporary reader as a thoroughly mixed bag, 41 years after its first publishing. Both a series of mischaracterizations of ancient sociality and an inspiring vision of human social potential, *The Ecology of Freedom* leaves the door open to continued examination of social ecological theory beyond Murray Bookchin's personal contribution. "No gods, no masters" is a call to reject personality cult, this is not to suggest that practicing social ecologists worship Bookchin, but an apt reminder that there is a need to move beyond his more problematic ideas. Even through critique, social ecology stands to develop a theoretical-praxis that utilizes anthropology to create improved strategies for incorporating hierarchy and heterarchy into a spectrum of social arrangements, to counter social inequality and climate catastrophe.

In looking for the ways in which social ecological theory could be improved upon, Christopher Boehm's *Hierarchy in the Forest* (2001) provides a detailed accounting of methods used in the ethnographic record to maintain an egalitarian ethos. Boehm moves past relying solely on traditional foraging models and intends a more

inclusive model with "intentional communities". This overview provides practical and actionable methods of maintaining an egalitarian ethos, developed over millennia, that can be implemented in intimate social groups. *Hierarchy in the Forest*, if studied and implemented, could provide an immediate and concrete means of enacting social-ecological principles. Boehm's work can be understood as a practical counterweight to Bookchin's idealized conceptions of egalitarian societies.

Chapter IV - Intentional Communities

State(s) of Nature?

Bookchin's *The Ecology of Freedom* presents a narrative of human history which invokes Rousseau's romantic notions of a prehistoric golden age of social relations. Degrees of social hierarchy and their nonlinear change over time are unacknowledged by Bookchin's *organic societies*. Rather than existing as stages or mutually exclusive, egalitarianism and domination interconnect in complex manifestations that are unique to particular social groups. In suggesting that human history progressed on a linear trajectory from simple freedom to complex domination, he undermines his own dialectical framework. This is in comparison to Crumley's use of heterarchy, which provides a dialectical framework to present a more complicated and accurate representation of prehistoric and contemporary social arrangements.

Rousseauian romanticism is often contrasted with a Hobbessian binary that is equally incorrect in its analysis, or perhaps, lack thereof. Both philosophers based their political theory on conjecture and second-hand colonial accounts about the nature of human social history; these simplistic and generalized accounts continue to inform popular conceptions about social possibility. Hobbes and Rousseau's social contract theory suggest individuals consent to surrendering certain freedoms to a hierarchical authority in order to protect collective social order - individuals cannot be trusted to act with the best interest of the collective in mind. Hobbes characterized prehistoric human

nature as anarchic in the pejorative sense, "without order", and "chaos". There were, and continue to be, emergent communities formed around bottom-up, horizontal organizational principles, "order out of chaos" (Crumley 2005). Egalitarian social contracts invert the expectations of these European Enlightenment philosophers; social order is maintained by securing the freedoms and autonomy of the individual.

Contemporary anthropology presents a much more concrete, verifiable, and perhaps most importantly, falsifiable picture of the remote past. As information about early human social arrangements continues to emerge and be synthesized, anthropologists can safely say that much of Bookchin's vision of human prehistory is colored by rosy retrospection. Bookchin is not alone in his idealized, generalized, and oversimplified vision of the past. A troubling divide continues to exist between the general public and academic anthropology. Popular science writers such as Diamond (2012), Fukuyama (2011), and Harari (2014) have continued to perpetuate Edenic characterizations of human prehistory ("innocent of power and complexity") that are typical of theology and Rousseau, not a scientifically literate public (Graeber & Wengrow 2015). It should be noted that the above-mentioned authors are notably *not* professional ethnographers or archaeological specialists - their specialties respectively: physiology, political science, and medieval history. Human social history is more complex and flexible than traditionally transmitted to public consciousness.

Christopher Boehm, a cultural anthropologist, provides a detailed overview of the concrete practices of social groups grappling with the human social condition in

Hierarchy in the Forest (2001). Published within Bookchin's lifetime, *Hierarchy in the Forest* conveys a nuanced understanding of social mechanisms used in order to maintain egalitarian relations. Unlike Bookchin's overarching theoretical narrative of social history, Boehm (2001) imparts an inventory of community values and practices that can be practically applied. Supported by rigorous anthropological study, *Hierarchy in the Forest* is a much needed intervention in Social Ecology's theoretical-praxis.

Potentia: The Possibilities of Power

Humans engage in a number of social behaviors that appear to be contradictory, self and group interests; competition and cooperation; peace and violence, etc. Boehm identifies the contradictions that define human nature, which he terms ambivalence theory (Boehm 2001: 231). At the extremes, human nature appears to resemble the fictions of "war against all" or "noble savage", but due to the dialectical nature of human social behaviors, the extremes more accurately represent caricatures rather than any actual existing society. Humans are not defined by one terminus or another, but by the ability to incorporate degrees of each - as Whitman wrote, "I contain multitudes". Boehm interprets the despotic drive in humans as having originated in the shared common ancestor with genus *Pan*, some six million years ago (Boehm 2001: 252). Genus *Pan* offers another conundrum: is human social behavior derived from aggressive, hierarchical chimpanzees or from free-loving, female coalition-led bonobos? False choice aside, dominance-submissive dynamics and coalitional behaviors appear to be innate

dispositions of a common ancestor. What set ancestral humans apart was the newly developed ability to self-consciously implement social innovations to reduce strict hierarchies (Boehm 2001).

Wrangham (2019) dates efforts of self-domestication in *Homo sapien*s to roughly 300,000 years ago, when humans began more intensively selecting for reduced aggression, particularly in domineering males. Subordinate members (i.e., less aggressive men, women, elderly, children, disabled) domesticated alpha males by means of collective intentionality. For ancestral humans, achieving relative consensus would have required the ability for specific and detailed communication (Boehm 2001). Group cooperation was bolstered by what Wrangham terms a *language-based conspiracy* (Wrangham 2019). According to Wrangham's concept, sophisticated communication acted as a leveling mechanism to coordinate and conspire against physically dominant males. Aggressive males would become more calculated and hesitant in their actions against group members. Capital punishment would then act as an ultimate deterrent for even the most violent males.

Within human social groups there are paradoxical tendencies to dominate, and to resent and resist domination. In order to prevent the consolidation of social power, typical of aggressive males, subordinate members implement sociocultural values and practices to protect themselves from arbitrary violence. Subaltern individuals self-consciously organize communities around the rejection of arbitrary authority and prosocially engineer to counter deviance (Boehm 2001). Acting as political coalitions from below, fear of

being individually coerced is a primary motivation for an inversion of power dynamics (Boehm 2001). Egalitarian practices and methodologies are fairly consistent across time and space due to the nature of addressing "practical political problems" universal to all human social group dynamics (Boehm 2001: 123). Graeber (2013) relays a similar sentiment, "after all, there are only so many ways a political system can be organized" (p. 6).

Boehm's *reverse dominance hierarchy* intends to reconcile evolutionary dispositions towards hierarchy with egalitarian social innovations. Reverse dominance hierarchies appear to concur with heterarchical interpretations as well - egalitarianism is less an independent or antithetical typology, more so a different kind of hierarchy. Societies that embody an egalitarian ethos utilize similar means for different ends. As with the question of "nature or nurture?", hierarchy and egalitarianism exist as fraternal twins, forever entwined - reverse dominance hierarchies intend to nurture our nature.

At the heart of reverse dominance hierarchies is an egalitarian ethos; a constellation of prosocial values, an ideology of active resistance and voluntary association - not unlike Pierre Clastres' (1974) "societies against the state" (Boehm 2001). Coercion, centralization, and bureaucracy are met with a militant culture of rebellion. Boehm frames these societies as intentional, moral communities. Organized around a prosocial blueprint, affinity groups act to prefiguratively map out how life should be. In keeping with the apparent contradictions, groups that hold individual autonomy in high regard demand a certain amount of conformity (Boehm 2001).

Prevention of arbitrary hierarchy (i.e., hereditary, gerontocracy) involves a submission and adherence to their moral standards (Boehm 2001). An equitable sameness intends for a common ground from which to build, establish, and to benefit from a "web of obligations". This is the same relational wealth norms taught amongst the children of previously mentioned groups like the Tanzanian Hadza, Kalahari San, and Canadian Inuit.

Of course, even when designed around ideal social arrangements, intentional-moral communities are certainly not without their flaws or struggles. Negotiating group consensus is difficult to achieve and even more so to maintain. Maintenance of consensus must be consistent, continuous, and necessarily requires at least some compromise. Deviance is a perennial threat to community stability. Because an individual's particular viewpoint or stance on certain issues can quickly amount to life-threatening circumstances, groups expect to hear semi-formal statements of their beliefs (Boehm 2001). Information sharing, particularly of the status of interpersonal relationships, becomes an immensely valuable resource (Basyouni & Parkinson 2022). There may be corrupt individuals or members that refuse participation but, as Harold Barclay relays, "the battle is forever…eternal vigilance [is] the bare minimum price for even a modicum of success" (Barclay 1982: 150). Disagreements, disputes, and altercations will inevitably arise and require resolution in order to restore social composure or risk group-disbandment. Nominal differences in material wealth or status can be tolerated as long as the fundamental agreement of group preeminence goes unaffected (Boehm 2001).

Greater than the Sum of its Parts: Egalitarian Methodology

Despite the inherent and enduring difficulties in organizing societies around an egalitarian ethos, humans share an intuitive, collective risk management - Boehm's *actuarial intelligence* (Boehm 2001: 183). Resources can be selectively shared with non-kin, both intra and intergroup. Long-term generalized reciprocity acts as insurance against unpredictable events in which recipients can be called upon for support (i.e., sickness, injury, drought, famine, social system collapse). Disparate relationships can be woven in ways to address particular needs, acting as a security net and social welfare system (i.e., child rearing, elder care, disability support, alleviating circumstantial poverty). Here again is an illustration of the egalitarian social contract; group social well-being is secured by the health, mobility, and social networks of the individual.

Some cultures, like the Maasai (Kenya, Tanzania), practice a risk-pooling system they call *osotua* ("umbilical cord"). Osotua is a gift-giving system that is based on the recipient's needs, gifts that are not reciprocal and do not create debt - it is paired with *esile* (debt-based transfers system) (Campennì et al. 2021). Debt-based transfers are made with expected repayment, need-based transfers are given freely, without compensation. Need-based transfers are often practiced among alliances in diverse ecological areas to distribute risk more evenly across fluctuating terrains (Campennì et al. 2021). Campennì et al. (2021) determined that "spontaneous helping networks" (needs-based transfers), alongside larger and more modular social networks, can emerge in response to catastrophes and increase the overall likelihood of survival. Bookchin's *equality of*

unequals approximates helping networks based on *osotua* principles and its resulting equality of outcome rather than equality of opportunity (i.e., meritocracy).

An egalitarian ethos is put into practice by the collective bargaining of rank-and-file, through a "diversity of tactics". Reputation and group opinion work to signal potential need to sanction antisocial and domineering tendencies (i.e., arrogance, aggression, stinginess, hypercompetitiveness, manipulativeness) (Boehm 2001). Undesirable personalities (i.e., bullies, upstarts, alpha males, freeriders) are actively selected against (i.e., ridicule, gossip, shunning, ostracism), while prosocial behaviors (i.e., generosity, cooperation, honesty, humility) are reinforced (Boehm 2001). These mechanisms serve as positive and negative reinforcements of collective commitment to group order and personal autonomy. Self-aggrandizing and self-serving tendencies can be socially mediated and relatively neutralized through diffuse sanctions (Boehm 2001). Basic peer pressure makes up the majority of non-confrontational efforts at conformity within egalitarian groups.

Diffuse sanctions are not always adequate to address problematic behaviors. If a group loses enough trust in a particular individual, more extreme measures may be taken (i.e., expulsion, exile, execution) (Boehm 2001). Social death, or literal physical death, are actions of last-resort - and are perhaps in-and-of-themselves anti-social in practice, but are intended to stabilize group relations. Capital punishment (whether by law enforcement or lethal injection) and solitary confinement are both contentious contemporary issues that provoke debate about "cruel and unusual" practices. Intentional

communities may also suffer from parochialism, a disconnect from wider social networks that may fuel both internal deviance and anti-social methodology. Ultimately, an egalitarian ethos envisages prosocial practices that are capable of rehabilitating deviants, often preemptively.

Prosocial behaviors expected amongst rank-and-file members of a community anticipate the desired qualities in leadership as well (Boehm 2001). Leaders are expected to be highly skilled orators and mediators, often directing conflict management and establishing consensus amongst their community (Boehm 2001). Reputation, prestige, charisma, and spheres of social influence are in-and-of-themselves neutral components of leadership, but not without their potential downsides (i.e., aloofness, overbearing, irresponsible, or behaving as more equal than others) (Boehm 2001). Of course, the existence of leaders–even weak leaders–can be problematic for the communities that house them. Leadership has a "dark side": status can be wielded against subordinates (i.e., degradation, harassment, physical aggression), often without meaningful recourse. Organizational leadership can be fertile ground for psychopaths or psychopathic tendencies; "grandiosity, egocentricity, deceptiveness, shallow emotions, lack of empathy or remorse, irresponsibility, impulsivity, and a tendency to ignore or violate social norms" (Mathieu et al. 2014: 83).

Ambivalent balance between power and social cohesion is evidenced in the competitive altruism of Big Men feasts and the Pacific Northwest Coast *potlatch.* In the potlatch, leaders are able to use ritual resource redistribution to enhance their personal

prestige among rank-and-file community members (Graeber & Wengrow 2018). Prestige is not enough to institutionalize command-obey relations; rank-and-file members can employ leveling mechanisms against their leaders (i.e., disobedience, deposition, desertion) if faith is lost in their ability to guide the group (Boehm 2001). Relocation ("voting with their feet") is enabled by highly developed social networks. Bilateral kinship can support individuals to autonomously self-associate with either paternal or maternal familial groups (Angelbeck & Grier 2012). Despotism is more likely where subordinates are unable to easily leave (i.e., sedentism, controlled resources) and subordinates are less willing to accept exploitation if resources are uniformly abundant (Singh & Glowacki 2022).

Leadership, as understood by an egalitarian ethos, is a precarious position to occupy. Egalitarian leadership is naturally weak, ephemeral, and rotational - justified authority is circumstantial and contextual; when hunting for instance, a group is best led by the most proficient hunter, but this specialized expertise does not necessarily translate to other areas of group social life (Boehm 2001). In this way, egalitarianism understands social organization as acephalous ("without head"), perhaps an amendment to this notion is that egalitarian social power is expressed as a hydra ("many headed"). Distributed, decentralized governance allows institutional counter-power to renegotiate group power dynamics.

Hierarchy is far more nuanced than Bookchin was willing to acknowledge. Whether Crumley's heterarchy or Boehm's reverse dominance hierarchy, hierarchies are

not inherently rooted in relations of domination and coercion. An egalitarian ethos can invert despotic tendencies into various forms of counter-power and complementary forms of heterarchical- hierarchical arrangements. Crumley's theoretical contributions paired with Boehm's practical methodologies allows for both a narrative of prehistoric human social flexibility and a potential prescription which Bookchin had intended to establish for Social Ecology.

Chapter V - Edge of Chaos

Mutually Assured Survival... Maybe...

Ecological collapse, climate catastrophe, and social inequality are arguably the most pressing concerns for the continued survival of the human species and complex life generally. Special attention to ecological collapse was validated in October of 2022 with the release of the UN's Emissions Gap Report acknowledging that, "climate crisis calls for rapid transformation of societies" (UNEP 2022). "Inadequate action", "very limited progress", and "closing window" are phrases used throughout the report (UNEP 2022). Similarly, UN Secretary General António Guterres, in regard to climate crises, suggests that, "We have a choice. Collective action or collective suicide. It is in our hands." (Harvey 2022).

Calls for "societal transformation" that do not explicitly include the leveling of social inequality will necessarily miss the intended mark. While the above quotes specifically address the existential threats of climate catastrophe, there is little detailing of what "societal transformation" actually entails beyond minimizing fossil fuel extraction and carbon emissions. Social transformation–if taken to literally suggest rearranging and reimagining how societies are organized–would entail reevaluating the ways in which egalitarianism and direct democracy can foster more equitable social institutions. Research has shown that imagining a better world can increase real-world motivation towards taking concrete actions to change society (Fernando et al. 2018). Just as an egalitarian ethos is only a blueprint for desired values and morals (there are no

guarantees for social equity), utopian ideals are similarly products of a collective imagination reflecting on equitable societies. Egalitarianism weaves foresight with pragmatic action. This is the space between order and disorder.

Elite social values such as privatization, monopolization, over-production, and over-consumption, dominate the industrialized western world, and have been effectively globalized. These values threaten bio-cultural diversity with standardization: a social-ecological monoculture that threatens the survival of complex life. Graeber & Wengrow (2021) conclude their book *Dawn of Everything* with what might feel like a disappointing prescription: There are no panaceas to strict hierarchy and ecological collapse. Implicit to this suggestion, however, is that there are many solutions to be developed to meet the needs and circumstances of unique societies in particular and rapidly changing ecological circumstances. Complex problems are best dealt with by complex solutions (Ostrom 1990). The egalitarian methodology examined in this thesis suggests a "diversity of tactics" to ensure long-term reversal of detrimental hierarchies. These organizing principles alongside extant ethnography, archaeology, and paleoanthropology, offer tried-and-true, real-world strategies to build upon and incorporate into egalitarian projects at various scales and in various contexts. Consider the following two tactics as examples of egalitarian methodology, each of which share similar imaginative social-ecological aspirations with Bookchin, but are perhaps more realistic and grounded.

Polycentricity: Similar to Crumley's heterarchy, Elinor Ostrom proposes that polycentricity ("many centers") allows ranks within hierarchies to freely associate and

encourages bottom-up self-organization (Crumley 2015, Ostrom 1990). Polycentricity

intends to strengthen interaction and dialogue between local-regional communities, and

national governments and corporations that dominate the production of social-ecological

policies. Ostrom won the Nobel Memorial Prize in Economic Sciences in 2009 for her

work that demonstrated both theoretically and ethnographically (such as Maasai

pastoralists) that many societies have effectively organized around common-pool

resources. Ostrom thoroughly dispels Garrett Hardin's (1968) neo-Hobbesian "Tragedy

of the Commons" which suggests that individuals' self-interest will necessarily lead to

overexploitation of finite resources (Ostrom 1990).

Degrowth: Degrowth is an emerging set of theories which critique private

ownership's "grow or die" imperative and is similarly focused on both social inequality

and unsustainable economic development (Hickel et al. 2022). Degrowth critiques GDP

(gross domestic product) as a primary indicator of prosperity. Based on an economic

dogma of perpetual growth, GDP is expected to increase at a steady rate annually, which

recalls outdated theories of linear social development. Loss of biodiversity and climate

catastrophe are both visceral reminders that infinite growth on a planet of finite resources

threatens mass extinction. Degrowth is a diverse body of unfolding ideas, among them;

reduce less-necessary production (i.e., fossil fuels, animal agriculture, car culture,

advertising, demilitarization), improve public services, introduce green jobs guarantee,

reduce working time, enable sustainable development, etc. (Hickel et al. 2022).

There are a number of additional developing fields of theoretical-praxis that hold valuable social-ecological potential; bioregionalism, adaptation of social organizations to naturally defined zones; permaculture, habitat management and community design which emulates arrangements observed in thriving natural ecosystems; agroecology, study of ecological processes applied to agricultural production; Earth Jurisprudence, a philosophy of law and system of governance that suggests the wellbeing of communities of complex life are dependent on the holistic wellbeing of the biosphere; and traditional ecological knowledge (TEK) and the "Land Back" movement are important focuses originating from Indigenous communities. These tactics and more represent tangible theoretical-praxis that Social Ecology can incorporate and adopt.

Eulogy for Murray

Murray Bookchin would have celebrated his 102nd birthday this past January 14th. His analysis of human evolution amounted to an oversimplified mischaracterization of a deeply rich and complex social history of strict hierarchies, egalitarian societies, and the spectrum of possibilities between. Of course he is not solely responsible; his intellectual pursuits were at least partially informed by the state of academic anthropology throughout the 1950's-1980's. Although much of his anthropological theory was incorrect, he was certainly prescient and amongst the initial few to call for social transformations that could address ecological collapse. Hierarchy, for Bookchin, was the pure domination of society and inevitably projected onto nature. His belief was

that hierarchy needed to be wholly rejected in favor of "rational ecological societies". Strict hierarchies have undoubtedly contributed to social inequalities and mass extinction. But hierarchy–in varying forms and in diverse contexts–appears inherent to human social organization, and not something that can be categorically rejected (Boehm 2001; Crumley 1995, 2005, 2007, 2015; Graeber & Wengrow 2015, 2018; Singh & Glowacki 2022). Rather than dismiss hierarchy, it may be essential for societies pursuing egalitarianism to incorporate hierarchy to some degree in order to function; whether as inverted dominance hierarchies (a la Boehm) or heterarchies (a la Crumley).

The Ecology of Freedom provides an important reminder that academic researchers can sometimes derive value and inspiration from non-academic researchers. Much like the ambivalence of human nature, there is potential inspiration within such an elaborate and rugged text, and Bookchin's thought generally. Social Ecology continues to inspire fertile ground with aspirations to level social inequality and create a more livable world for all its inhabitants. Bookchin was certainly irrationally optimistic about the human potential to transmute modern destructive tendencies into future "rational ecological societies", especially given humanity's current trajectory and momentum. What remains however is the unavoidable reality that humans (specifically inflexibly hierarchical modes of social organization and their elite members) are both primarily responsible for climate devastation and the only observing animal that has the conscious ability to confront catastrophe. This is another unavoidable reality: Catastrophe is

ongoing and guaranteed in the short term, so a reasonable immediate aim is to moderate disasters and destruction.

Bookchin's tenet, the ecological crisis is a social crisis, finds dialectical fulfillment in ecological catastrophe; the social crisis is also an ecological crisis. The onset of the sixth extinction, rapidly altering ecologies and landscapes, finds a relative analogue in the climactic upheavals of the Pleistocene which allowed for and demanded such varied socio-political transformations and differentiation (Graeber & Wengrow 2015). This was true for the Moche culture (Peru) who would disband in part due to fluctuations in the El Nino weather system. The French and Russian Revolutions were also in-part precipitated by agricultural famine and bread shortages. Perhaps there are still opportunities for social groups to willingly organize around an egalitarian ethos, rather than be obligated by encroaching disaster. Bookchin was correct in his intuition that anthropology is central to any future academic contributions to Social Ecology, particularly ancestral communities. Diversity throughout the Pleistocene and ethnographic social organization acts as a reservoir of possible social arrangements for modern humans; "The assumption that what currently exists must necessarily exist is the acid that corrodes all visionary thinking" (Bookchin 1990: 3).

In reflecting on the May 1968 French protest slogan, "Be realistic, demand the impossible"; Bookchin reworks the motto to reflect ecological collapse; "If we don't do the impossible, we shall be faced with the unthinkable" (Bookchin 2005: 107). Bookchin's primary strengths as a communicator were his passion and conviction that a

better world is possible, and necessary for continued survival. If the modern Social

Ecology movement can adapt to new findings from academic anthropology, it may prove

to be an effective theoretical-praxis for addressing social inequality and ecological

catastrophe.

References

Chapter I: Introduction to Bookchin, Social Ecology, Hierarchy

Associated Press. (2022, August 28). *Pakistan's floods have killed more than 1,000. It's been called a climate catastrophe*. NPR. Retrieved January 4, 2023, from https://www.npr.org/2022/08/28/1119854665/pakistan-flooding-climate-change

Boehm, C. (2001). *Hierarchy in the forest: The evolution of egalitarian behavior*. Harvard University.

Bookchin, M. (1990). *The meaning of confederalism*. The Anarchist Library. Retrieved February 3, 2023, from https://theanarchistlibrary.org/library/murray-bookchin-the-meaning-of-confederalism

Bookchin, M. (2005). *The Ecology of Freedom: The emergence and dissolution of Hierarchy*. AK Press.

Cafaro, P. (2015). Three ways to think about the sixth mass extinction. *Biological Conservation*, *192*, 387–393. https://doi.org/10.1016/j.biocon.2015.10.017

Cappelli, F., Costantini, V., & Consoli, D. (2021). The trap of climate change-induced "natural" disasters and inequality. *Global Environmental Change*, *70*, 102329. https://doi.org/10.1016/j.gloenvcha.2021.102329

CBS News. (2022, July 29). *Oil companies reap unprecedented profits as Americans struggle to pay for food and Gas*. CBS News. Retrieved January 4, 2023, from https://www.cbsnews.com/news/oil-companies-record-profits-2022-exxon-chevron/

Costa, L. da, Oliveira, O. N., Travieso, G., Rodrigues, F. A., Villas Boas, P. R., Antiqueira, L., Viana, M. P., & Correa Rocha, L. E. (2011). Analyzing and modeling

real-world phenomena with complex networks: A survey of applications. *Advances in Physics*, *60*(3), 329–412. https://doi.org/10.1080/00018732.2011.572452

Credit Suisse. (2022). *Global wealth report 2020*. Retrieved January 4, 2023, from https://www.credit-suisse.com/media/assets/corporate/docs/about-us/research/publications/global-wealth-report-2020-en.pdf

Crumley, C.L. (2007). Contextual Constraints on State Structure. *Alternativeness in Cultural History: Heterarchy and Homoarchy as Evolutionary Trajectories.*

Feng, E. (2022, August 20). *China battles its worst heat wave on record*. NPR. Retrieved January 4, 2023, from https://www.npr.org/2022/08/20/1118619754/china-battles-its-worst-heat-wave-on-record

Frazin, R. (2022, September 15). *Internal documents cast doubt on Big Oil Climate promises*. The Hill. Retrieved January 4, 2023, from https://thehill.com/policy/energy-environment/3643691-internal-documents-cast-doubt-on-big-oil-climate-promises/

Gilmore, R. W. (2007). *Golden Gulag: Prisons, surplus, crisis, and opposition in Globalizing California*. University of California Press.

Green, F., & Healy, N. (2022). How inequality fuels climate change: The climate case for a green new deal. *One Earth*, *5*(6), 635–649. https://doi.org/10.1016/j.oneear.2022.05.005

Hase, V., Mahl, D., Schäfer, M. S., & Keller, T. R. (2021). Climate change in news media across the globe: An automated analysis of issue attention and themes in climate change coverage in 10 countries (2006–2018). *Global Environmental Change*, *70*, 102353. https://doi.org/10.1016/j.gloenvcha.2021.102353

Hickel, J. (2020). Quantifying national responsibility for climate breakdown: An equality-based attribution approach for carbon dioxide emissions in excess of the planetary boundary. *The Lancet Planetary Health*, *4*(9). https://doi.org/10.1016/s2542-5196(20)30196-0

IDMC. (2021). *Global Internal Displacement Database*. IDMC. Retrieved January 4, 2023, from https://www.internal-displacement.org/database/displacement-data

IPCC. (2022). *Climate change 2022: Impacts, adaptation and vulnerability*. Intergovernmental Panel on Climate Change. Retrieved January 4, 2023, from https://www.ipcc.ch/report/ar6/wg2/

Johnson, J. (2020, June 4). *Amid covid-19 and nationwide protests, America's billionaires got $79 billion richer over the last week*. Common Dreams. Retrieved January 4, 2023, from https://www.commondreams.org/news/2020/06/04/amid-covid-19-and-nationwide-protests-americas-billionaires-got-79-billion-richer

Know Your Meme. (2022, October 5). *Google Murray Bookchin*. Know Your Meme. Retrieved January 4, 2023, from https://knowyourmeme.com/memes/google-murray-bookchin

Lawler, O. K., Allan, H. L., Baxter, P. W., Castagnino, R., Tor, M. C., Dann, L. E., Hungerford, J., Karmacharya, D., Lloyd, T. J., López-Jara, M. J., Massie, G. N., Novera, J., Rogers, A. M., & Kark, S. (2021). The COVID-19 pandemic is intricately linked to biodiversity loss and Ecosystem Health. *The Lancet Planetary Health*, *5*(11). https://doi.org/10.1016/s2542-5196(21)00258-8

NPR. (2022, August 31). *Heavy rain and flooding leave Jackson, Miss., residents without running water*. NPR. Retrieved January 4, 2023, from https://www.npr.org/2022/08/31/1120223500/heavy-rain-and-flooding-leave-jackson-miss-residents-without-running-water

OHCHR. (2022). *About indigenous peoples and human rights*. Office of the High
Commissioner of Human Rights. Retrieved January 4, 2023, from
https://www.ohchr.org/en/indigenous-peoples/about-indigenous-peoples-and-human-
rights

Schmidt, P. M., & Peterson, M. J. (2009). Biodiversity Conservation and Indigenous
Land Management in the era of self-determination. *Conservation Biology*, *23*(6),
1458–1466. https://doi.org/10.1111/j.1523-1739.2009.01262.x

Slamowitz, C. L. (2022). *Profiteering off public health crises: The viable cure for
congressional insider trading*. Washington and Lee University School of Law
Scholarly Commons. Retrieved January 4, 2023, from
https://scholarlycommons.law.wlu.edu/wlulr-online/vol77/iss1/3/

Walz, Y., Janzen, S., Narvaez, L., Ortiz-Vargas, A., Woelki, J., Doswald, N., &
Sebesvari, Z. (2021). Disaster-related losses of ecosystems and their services. Why
and how do losses matter for disaster risk reduction? *International Journal of
Disaster Risk Reduction*, *63*, 102425. https://doi.org/10.1016/j.ijdrr.2021.102425

Westervelt, A. (2022, February 24). *Revealed: Leading climate research publisher helps
fuel oil and gas drilling*. The Guardian. Retrieved January 4, 2023, from
https://www.theguardian.com/environment/2022/feb/24/elsevier-publishing-climate-
science-fossil-fuels

World Inequality Report. (2022, March 29). *The world inequality report 2022: the most
up-to-date & complete data on Inequality Worldwide*. World Inequality Report 2022.
Retrieved January 4, 2023, from https://wir2022.wid.world/

Chapter II: Hierarchy & Heterarchy, Synthesized

Bar-Yam, Y. (2002). General features of complex systems. *UNESCO Encyclopedia of Life Support Systems*.

Bird, D. W., Bird, R. B., Codding, B. F., & Zeanah, D. W. (2019). Variability in the organization and size of hunter-gatherer groups: Foragers do not live in small-scale societies. *Journal of Human Evolution*, *131*, 96–108. https://doi.org/10.1016/j.jhevol.2019.03.005

Bondarenko, D. M. (2007). Homoarchy as a principle of sociopolitical organization. an introduction. *Anthropos*, *102*(1), 187–200. https://doi.org/10.5771/0257-9774-2007-1-187

Costa, L. da, Oliveira, O. N., Travieso, G., Rodrigues, F. A., Villas Boas, P. R., Antiqueira, L., Viana, M. P., & Correa Rocha, L. E. (2011). Analyzing and modeling real-world phenomena with complex networks: A survey of applications. *Advances in Physics*, *60*(3), 329–412. https://doi.org/10.1080/00018732.2011.572452

Crumley, C. L. (1995). Heterarchy and the analysis of complex societies. *Archeological Papers of the American Anthropological Association*, *6*(1), 1–5. https://doi.org/10.1525/ap3a.1995.6.1.1

Crumley, C. L. (2005). Communication, holism,and the evolution of sociopolitical complexity. *Fundamental Issues in Archaeology*, 19–33. https://doi.org/10.1007/978-1-4615-1297-4_2

Crumley, C.L. (2007). Contextual Constraints on State Structure. *Alternativeness in Cultural History: Heterarchy and Homoarchy as Evolutionary Trajectories.*

Crumley, C. L. (2015). Heterarchy. *Emerging Trends in the Social and Behavioral Sciences*, 1–14. https://doi.org/10.1002/9781118900772.etrds0158

Cumming, G. S. (2016). Heterarchies: Reconciling Networks and hierarchies. *Trends in Ecology & Evolution*, *31*(8), 622–632. https://doi.org/10.1016/j.tree.2016.04.009

Glowacki, L., & Lew-Levy, S. (2022). How small-scale societies achieve large-scale cooperation. *Current Opinion in Psychology*, *44*, 44–48. https://doi.org/10.1016/j.copsyc.2021.08.026

Graeber, D., & Wengrow, D. (2021). *The dawn of everything: A new history of humanity*. Farrar, Straus and Giroux.

Green, A. S. (2020). Killing the priest-king: Addressing egalitarianism in the Indus Civilization. *Journal of Archaeological Research*, *29*(2), 153–202. https://doi.org/10.1007/s10814-020-09147-9

Holland-Lulewicz, J., Thompson, V. D., Birch, J., & Grier, C. (2022). Keystone Institutions of Democratic Governance Across Indigenous North America. *Frontiers in Political Science*, *4*. https://doi.org/10.3389/fpos.2022.840049

Marquardt, W. H., Walker, K. J., Thompson, V. D., Savarese, M., Roberts Thompson, A. D., & Newsom, L. A. (2022). Episodic complexity and the emergence of a coastal kingdom: Climate, cooperation, and coercion in southwest Florida. *Journal of Anthropological Archaeology*, *65*, 101364. https://doi.org/10.1016/j.jaa.2021.101364

Miller, J. M., & Wang, Y. V. (2021). Ostrich eggshell beads reveal 50,000-year-old social network in Africa. *Nature*, *601*(7892), 234–239. https://doi.org/10.1038/s41586-021-04227-2

Ortmann, A. L., & Kidder, T. R. (2012). Building mound A at Poverty Point, louisiana: Monumental public architecture, ritual practice, and implications for hunter-gatherer complexity. *Geoarchaeology*, *28*(1), 66–86. https://doi.org/10.1002/gea.21430

Rosenberg, M., & Rocek, T. R. (2019). Socio-political organization in The aceramic neolithic of southwestern asia: The complex evolution of socio-political complexity. *Journal of Anthropological Archaeology*, *54*, 17–30. https://doi.org/10.1016/j.jaa.2019.01.006

Sapolsky, R. M., & Share, L. J. (2004). A Pacific culture among wild baboons: Its emergence and transmission. *PLoS Biology*, *2*(4). https://doi.org/10.1371/journal.pbio.0020106

Thompson, V. D., Holland-Lulewicz, J., Butler, R. L. A., Hunt, T. W., Wendt, L. A., Wettstaed, J., Williams, M., Jefferies, R., & Fish, S. K. (2022). The early materialization of democratic institutions among the ancestral muskogean of the American Southeast. *American Antiquity*, *87*(4), 704–723. https://doi.org/10.1017/aaq.2022.31

Thompson, V. D., Marquardt, W. H., Walker, K. J., Thompson, A. D., & Newsom, L. A. (2018). Collective action, state building, and the rise of the Calusa, Southwest Florida, USA. *Journal of Anthropological Archaeology*, *51*, 28–44. https://doi.org/10.1016/j.jaa.2018.05.003

Tombak, K. J., Wikberg, E. C., Rubenstein, D. I., & Chapman, C. A. (2019). Reciprocity and rotating social advantage among females in egalitarian primate societies. *Animal Behaviour*, *157*, 189–200. https://doi.org/10.1016/j.anbehav.2019.09.010

Vujovic, F., Hunter, N., & Farahani, R. M. (2022). Cellular self-organization: An overdrive in cambrian diversity? *BioEssays*, *44*(10), 2200033. https://doi.org/10.1002/bies.202200033

Chapter III - A Critical Reading of Bookchin

Angelbeck, B., & Grier, C. (2012). Anarchism and the archaeology of anarchic societies. *Current Anthropology*, *53*(5), 547–587. https://doi.org/10.1086/667621

Armstrong, C. G., Miller, J. E., McAlvay, A. C., Ritchie, P. M., & Lepofsky, D. (2021). Historical indigenous land-use explains plant functional trait diversity. *Ecology and Society*, *26*(2). https://doi.org/10.5751/es-12322-260206

Bennett, J. W. (1946). The interpretation of pueblo culture: A question of values. *Southwestern Journal of Anthropology*, *2*(4), 361–374. https://doi.org/10.1086/soutjanth.2.4.3628541

Bliege-Bird, R., McGuire, C., Bird, D. W., Price, M. H., Zeanah, D., & Nimmo, D. G. (2020). Fire mosaics and habitat choice in nomadic foragers. *Proceedings of the National Academy of Sciences*, *117*(23), 12904–12914. https://doi.org/10.1073/pnas.1921709117

Bookchin, M. (2005). *The Ecology of Freedom: The emergence and dissolution of Hierarchy*. AK Press.

Bookchin, M. (2022). *The Philosophy of Social Ecology: Essays on Dialectical Naturalism*. AK Press.

Boyd, R., & Richerson, P. J. (2022). Large-scale cooperation in small-scale foraging societies. *Evolutionary Anthropology: Issues, News, and Reviews*, *31*(4), 175–198. https://doi.org/10.1002/evan.21944

Crumley, C. L. (2015). Heterarchy. *Emerging Trends in the Social and Behavioral Sciences*, 1–14. https://doi.org/10.1002/9781118900772.etrds0158

Graeber, D. & Wengrow, D. (2015). Farewell to the 'childhood of man': Ritual,
seasonality, and the origins of inequality. *Journal of the Royal Anthropological
Institute*, *21*(3), 597–619. https://doi.org/10.1111/1467-9655.12247

Graeber, D., & Wengrow, D. (2018). "Many Seasons Ago": Slavery and its rejection
among foragers on the Pacific coast of North America. *American Anthropologist*,
120(2), 237–249. https://doi.org/10.1111/aman.12969

Hames, R. (2007). The ecologically noble savage debate. *Annual Review of
Anthropology*, *36*(1), 177–190.
https://doi.org/10.1146/annurev.anthro.35.081705.123321

Hames, R. (2019). Pacifying hunter-gatherers. *Human Nature*, *30*(2), 155–175.
https://doi.org/10.1007/s12110-019-09340-w

Kabukcu, C., Hunt, C., Hill, E., Pomeroy, E., Reynolds, T., Barker, G., & Asouti, E.
(2022). Cooking in caves: Palaeolithic carbonised plant food remains from Franchthi
and Shanidar. *Antiquity*, 1–17. https://doi.org/10.15184/aqy.2022.143

Lombard, M., & Kyriacou, K. (2020). Hunter-gatherer women. *Oxford Research
Encyclopedia of Anthropology*.
https://doi.org/10.1093/acrefore/9780190854584.013.105

Singh, M., & Glowacki, L. (2022). Human social organization during the late pleistocene:
Beyond the nomadic-egalitarian model. *Evolution and Human Behavior*, *43*(5), 418–
431. https://doi.org/10.1016/j.evolhumbehav.2022.07.003

Smith, E. A., & Codding, B. F. (2021). Ecological variation and institutionalized
inequality in hunter-gatherer societies. *Proceedings of the National Academy of
Sciences*, *118*(13). https://doi.org/10.1073/pnas.2016134118

Vandermassen, G. (2008). Can darwinian feminism save female autonomy and leadership in egalitarian society? *Sex Roles*, *59*(7-8), 482–491. https://doi.org/10.1007/s11199-008-9478-3

Chapter IV - Intentional Communities

Angelbeck, B., & Grier, C. (2012). Anarchism and the archaeology of anarchic societies. *Current Anthropology*, *53*(5), 547–587. https://doi.org/10.1086/667621

Barclay, H. (1982). *People without government: An anthropology of anarchy*. Kahn & Averill.

Basyouni, R., & Parkinson, C. (2022). Mapping the social landscape: Tracking patterns of interpersonal relationships. *Trends in Cognitive Sciences*, *26*(3), 204–221. https://doi.org/10.1016/j.tics.2021.12.006

Boehm, C. (2001). *Hierarchy in the forest: The evolution of egalitarian behavior*. Harvard University.

Campennì, M., Cronk, L., & Aktipis, A. (2021). Need-based transfers enhance resilience to shocks: An agent-based model of a Maasai risk-pooling system. *Human Ecology*, *50*(1), 35–48. https://doi.org/10.1007/s10745-021-00273-6

Crumley, C. L. (2015). Heterarchy. *Emerging Trends in the Social and Behavioral Sciences*, 1–14. https://doi.org/10.1002/9781118900772.etrds0158

Graeber, D. (2013). Culture as creative refusal. *The Cambridge Journal of Anthropology*, *31*(2), 1–19. https://doi.org/10.3167/ca.2013.310201

Graeber, D. & Wengrow, D. (2015). Farewell to the 'childhood of man': Ritual, seasonality, and the origins of inequality. *Journal of the Royal Anthropological Institute*, *21*(3), 597–619. https://doi.org/10.1111/1467-9655.12247

Graeber, D., & Wengrow, D. (2018). "Many Seasons Ago": Slavery and its rejection among foragers on the Pacific coast of North America. *American Anthropologist*, *120*(2), 237–249. https://doi.org/10.1111/aman.12969

Mathieu, C., Neumann, C. S., Hare, R. D., & Babiak, P. (2014). A dark side of leadership: Corporate psychopathy and its influence on employee well-being and job satisfaction. *Personality and Individual Differences*, *59*, 83–88. https://doi.org/10.1016/j.paid.2013.11.010

Singh, M., & Glowacki, L. (2022). Human social organization during the late pleistocene: Beyond the nomadic-egalitarian model. *Evolution and Human Behavior*, *43*(5), 418–431. https://doi.org/10.1016/j.evolhumbehav.2022.07.003

Wrangham, R. W. (2019). Hypotheses for the evolution of reduced reactive aggression in the context of human self-domestication. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.01914

Chapter V - Edge of Chaos

Boehm, C. (2001). *Hierarchy in the forest: The evolution of egalitarian behavior*. Harvard University.

Bookchin, M. (1990). *The meaning of confederalism*. The Anarchist Library. Retrieved February 3, 2023, from https://theanarchistlibrary.org/library/murray-bookchin-the-meaning-of-confederalism

Bookchin, M. (2005). *The Ecology of Freedom: The emergence and dissolution of Hierarchy*.   AK Press.

Crumley, C. L. (2015). Heterarchy. *Emerging Trends in the Social and Behavioral Sciences*, 1–14. https://doi.org/10.1002/9781118900772.etrds0158

Fernando, J. W., Burden, N., Ferguson, A., O'Brien, L. V., Judge, M., & Kashima, Y. (2018). Functions of utopia: How utopian thinking motivates societal engagement. *Personality and Social Psychology Bulletin*, *44*(5), 779–792. https://doi.org/10.1177/0146167217748604

Graeber, D. & Wengrow, D. (2015). Farewell to the 'childhood of man': Ritual, seasonality, and the origins of inequality. *Journal of the Royal Anthropological Institute*, *21*(3), 597–619. https://doi.org/10.1111/1467-9655.12247

Graeber, D., & Wengrow, D. (2021). *The dawn of everything: A new history of humanity*. Farrar, Straus and Giroux.

Hardin, G. (1968). The tragedy of the commons. *Science*, *162*(3859), 1243–1248. https://doi.org/10.1126/science.162.3859.1243

Harvey, F. (2022, July 18). *Humanity faces 'collective suicide' over Climate Crisis, warns Un chief*. The Guardian. Retrieved January 22, 2023, from https://www.theguardian.com/environment/2022/jul/18/humanity-faces-collective-suicide-over-climate-crisis-warns-un-chief

Hickel, J., Kallis, G., Jackson, T., O'Neill, D. W., Schor, J. B., Steinberger, J. K., Victor, P. A., & Ürge-Vorsatz, D. (2022, December 12). *Degrowth can work - here's how science can help*. Nature News. Retrieved February 3, 2023, from https://www.nature.com/articles/d41586-022-04412-x

Ostrom, E. (1990). *Governing the commons* (Cambridge University Press 2015). Cambridge Univ Press.

UN Environment Programme. *Emissions gap report 2022*. Retrieved December 28, 2022, from https://www.unep.org/resources/emissions-gap-report-2022