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RESEARCH ARTICLE

Eco-utopia or eco-catastrophe? Re-imagining California as an ecological utopia

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In this article, I explore four California-based eco-utopias: The Earth Abides (George Stewart, 1949), Ecotopia (Ernest Callenbach, 1975), Pacific Edge (Kim Stanley Robinson, 1990), and Snow Crash (Neal Stephenson, 1992). All four novels were written during, and deeply informed by, the Cold War (Although published in 1992, Snow Crash was clearly written toward the end of the Cold War and in the shadow of Soviet implosion), against a backdrop of imminent nuclear holocaust and a doubtful future. Since then, climate change has replaced the nuclear threat as a looming existential dilemma, on which a good deal of writing about the future is focused. Almost 70 years after the appearance of The Earth Abides, and 40 years after the publication of Ecotopia, eco-utopian imaginaries now seem both poignant yet more necessary than ever, given the tension between the anti-environmental proclivities of the Trump Administration, on the one hand, and the tendency of climate change to suck all of the air out of the room, on the other. And with drought, fire, flood, wind and climate change so much in the news, it is increasingly difficult to imagine eco-utopias of any sort; certainly they are not part of the contemporary zeitgeist—except in the minds of architects, bees and futurists, perhaps. But does this mean there is no point in thinking about them, or seeking insights that might make our future more sustainable? This article represents an attempt to revive eco-utopian visions and learn from them.

Keywords: Utopia; Dystopia; Ecotopia; Sustainability transitions; California environment; Politics

> *They drove through Tehachapi in the morning glow, and the sun came up behind them, and then—suddenly they saw the great valley below them. Al jammed on the brake and stopped in the middle of the road and, "Jesus Christ! Look!" he said. The vineyards, the orchards, the great flat valley, green and beautiful, the trees set in rows, and the farm houses…. The distant cities, the little towns in the orchard land, and the morning sun, golden on the valley…. A windmill flashed in the sun, and its turning blades were like a little heliograph, far away. Ruthie and Winfield looked at it, and Ruthie whispered, "It's California."*
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> —John Steinbeck, *The Grapes of Wrath* (1976: 227)

I. Introduction

"California" as an imagined or imaginary utopia has long exercised a powerful hold over the world's imaginaries (Milkoreit, 2017).[1] Even before the first European invasion, the so-called Golden State loomed large as an archetype, providing the backdrop and fodder for many myths, novels, films, dreams and television shows over the past five centuries. From the black Queen Califia, who ruled a society of Amazons on the island of California in *The Adventures of Esplandián*, a 1510 Spanish novel by Garci Rodríguez de Montalvo, to the 1955 film "Seven Cities of Gold," starring Anthony Quinn, Michael Rennie and Rita Moreno, which displaced Cibola from the Sonora Desert in modern Mexico, to futuristic visions of water-sipping, vertical green cities and minds uploaded into cyberspace, California has played a central role in stimulating both fantasy and politics. Writing about "The Future of California History," Kerwin Lee Klein (2001: 467) observed that

> California's emergence as an economic and cultural center revitalized the old millenarian notions of the Pacific as the end of a westering History (with a capital H). Socialist utopia; suburban paradise; the thousand years of Christ's reign on earth; apocalypse by fire, earthquake, atom, or insurrection; the depths of entropy; the dustbin of history; a technological millennium; the destination of the death instinct—all of these different visions imprinted California's twentieth century.

Today, more than ever (it seems), the world looks to California for clues about a sustainable future. On the one hand, the state seems, both technologically and ecologically, ahead of the rest of the United States and the world. On the other, notwithstanding its wealth, the state

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floods, burns and quakes repeatedly, and both the well-off and the poor cause stress to finance, infrastructure and politics.

Nevertheless, there is no shortage of California-based utopian and dystopian imaginaries and visions (Heise, 2012), although really-existing California utopian experiments have not been very successful (Hine, 1983). Upton Sinclair's 1933 gubernatorial platform, *I, Governor of California, and How I ended Poverty: A True Story of the Future*, proposed a plan to transform the Depression-ridden state into a socialist paradise. John Steinbeck's story of the Dust Bowl refugees' *hegira* from disaster to a hoped-for Eden ended in California. Walt Disney's eponymous amusement park, opened in 1955, was reportedly inspired (in part) by the Santa Cruz Boardwalk and Oakland's Fairyland. And Silicon Valley's tech gurus—such as Elon Musk—generate near-daily promises of a bright and humane future, if not on Earth, then perhaps on Mars. Ironically, there have been few efforts to disabuse outsiders of these imaginaries—even dystopic futures have been made to seem attractive, as in Edan Lepucki's recent best-seller, *California* (2014) or "Elysium's" halcyon space station.[2] As home of the film industry, such imaginaries are only one genre among many that treat the state as a site of both promise and disaster, often at the same time (Miller, 2013; Davis, 1998).

California-based science fiction, in particular, offers a rich vein of both utopian and dystopian visions. Between the "native" writers —Ray Bradbury, Robert Heinlein, Ursula Le Guin, Philip K. Dick, Kim Stanley Robinson, Octavia Butler are among many (Ziser, 2013)— and the "outlanders" who have written about the state, California's future seems a blank slate. What was outlandish in 1982 ("Bladerunner") is almost second nature in 2017 ("Bladerunner 2049"). Moreover, as there is little in California that is "real" in any originary sense, everything seems possible. Kim Stanley Robinson (2013) calls California "a working utopia" and "a science fictional place. The desert has been terraformed. The whole water system is unnatural and artificial. This place shouldn't look like it looks…." It is not surprising that California was a model for his "Mars Trilogy."

Nowadays, most who attempt to describe the future find it difficult to imagine anything other than an ever more resource-hungry capitalism that seems to be leading to civilizational, if not humanity's, ecological doom (Milkoreit, 2017; O'Neill, 2018). Utopian imaginaries may contribute to this lack of concrete and practical strategies, promising that a "fix" is just around the corner when it is, at best, many years away. One result of hoping the imagined will come true is political paralysis: why act when someone will solve social and ecological challenges? This does not mean there is no point in thinking about alternatives to such imaginaries. If there is to be a future other than a disastrous one, must it not be imagined before beginning to build it? Or, as Karl Marx (1867) put it in *Capital*, "what distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality." Reality is messy, imagination is not. Can a realistic and perhaps *ecologically* utopian future, for both California and the world, be extracted from the hopes and fears of its visionary writers?

This essay explores four California-based ecological utopian novels and their implications for the politics of a sustainable society, not only in California but around the world: *The Earth Abides* (George Stewart, 1949), *Ecotopia* (Ernest Callenbach, 1975), *Pacific Edge* (Kim Stanley Robinson, 1990), and *Snow Crash* (Neal Stephenson, 1992). All four novels were written during and were deeply informed by the Cold War,[3] against a backdrop of imminent nuclear holocaust and an uncertain future. This sense of crisis is reflected in the novels. Stewart imagines the regression of civilization and society in the wake of a plague that eliminates virtually all of humanity (read "nuclear war"; see Lipschutz, 2002). Callenbach writes about Ecotopia's resistance to *reconquista* by the United States though the strategic placement of nuclear munitions in American cities. Stephenson portrays a hyper-capitalistic and hyper-commodified Los Angeles, in which one man with a missile warhead strapped to his motorcycle is an internationally-recognized "sovereign nuclear power." Although writing during the closing stages of the Cold War, Robinson[4] leaves out nuclear weapons, depicting a society that has managed to transit the so-called ecological bottleneck, albeit not without violence. In more recent novels, climate change has replaced the nuclear threat as a looming existential dilemma (Milkoreit, 2017). (At this writing, Robinson's most recent novel is *New York 2140* (2017), which somewhat optimistically depicts life in the city after the seas have risen to flood the lower parts of Manhattan).

The four novels were selected, out of many possibilities, to illustrate and illuminate social and political possibilities, tensions and limitations of utopian societies, especially ecological ones. They raise critical questions about how to get there, especially when all four books eschew political action, either eliding it altogether or alluding to it as something that just happens. *The Earth Abides* relies on transcendental intervention through miracles; *Ecotopia,* on cheap and plentiful solar energy. *Snow Crash* offers libertarian capitalism as the answer and, even though *Pacific Edge* begins to probe "the political," it, too, relies too heavily on "political will." While each novel offers a vision of the future, each one also forecloses that future by eliding politics and political struggle through a form of *Deus ex machina*.

I begin this essay with a broad discussion of both "utopia" and "eco-utopia" and what they are and mean, socially and politically. I then provide brief précis of the four novels and their political, economic and ecological context. In the third section, I discuss the politics of eco-utopias, dystopias, and utopian thinking in general, and address the absence of politics from most utopian imaginaries. Finally, I reflect on the novels and how we might approach the creation of really-existing ecological utopias.

II. Politics? In utopia?

The literature on utopia and dystopia is deep and extensive. Annette Giesecke and Naomi Jacobs (2012: 6) observe that, "The very word 'utopia' is a neologism evoking both

eutopia (Greek for 'good place') and *outopia* (Greek for 'no place'),"[5] which suggests that utopias are "good places" but have not and will never exist. Utopian and dystopian imaginaries often evince a desire to escape the trials, travails and politics of daily life and to identify pasts and futures in which all social and natural problems have been or can be solved. The earnest and idealistic story thus highlights what must be changed—if not how to do it—in the home society; the cynical and satirical story points out how absurd and out-of-touch with reality the home society is. While utopian imaginaries suggest the possibility of transforming society for the better, by "solving" society's problems, they can also limit productive collective thought and action.

The term "utopia" first appears in Thomas More's *Utopia* (1516/1891; the actual title of his book is *De optimo rei publicæ deque nova insula Utopia*, roughly translatable as "On the Best State of a Republic and on the New Island of Utopia"). Whether More's book was serious or satirical is the subject of some disagreement among critics. On the one hand, his depiction of an idealized communist society in which many social problems are eliminated (even as slavery was not) seems to point to humanity's eternal and innermost dreams and wishes; on the other, he may have meant to demonstrate how absurd and impossible such a society would be (Heiserman, 1963). Whatever More's intention, over the centuries since, there has been no shortage of utopian imaginaries and experimental projects. The key to a successful utopia is, it would seem, harmony among its residents, which requires that all ethics and values be held in common and that the problem of distribution be resolved (as in Marx's communist society). Politics must be abolished, since it reflects disagreement about means and ends. The fate of most "really existing" utopian experiments from the past is instructive here: instances of historical, structural and agential resistance to change are legion; patterns of thought and behavior proved difficult to change in the required direction; residents tired of regulation and privation (Levitas, 2003). Few have survived in their initial form beyond their first or second decade (however, see Litfin, 2013).

What utopian narratives do, therefore, is not so much to dazzle the reader with possibilities as to highlight the significant differences between the reader's own society and the imagined one, and to offer trenchant commentary on the state of the author's and reader's time, place and society (Barnhill, 2011). It is this dissonance that requires utopian imaginaries to be set far away in space or time, rather than close to the time of writing, and it is the gap between the now and then, or here and there, in which the politics of transition and transformation should appear.[6] Yet, few authors ever address this transition. California-based imaginaries mostly hew to this pattern but seem to be closer than most others in space and time, due perhaps to propinquity and imminence, along with the mythology of the Golden State.

How, then, do writers avoid the problem of transition? While utopias are relatively easy to conjure up, it is almost impossible to map out the social transition and strategies for getting there. To deal with this lacuna, utopian and dystopian works commonly take the form of a "traveler's tale":

> The narrator is an "alien" who has dropped in on the utopian society, either through time travel or by crossing a physical barrier. As readers, we learn what the narrator sees, hears, and most importantly, what he/she is told by a utopian citizen. In other words, the narrator is dependent upon a native citizen's knowledge and perspective for any kind of information. So too is the reader. Thus, readers are also "aliens" who have dropped in on a strange, new society and in need of context and history (Gulick, 1996; see also Gulick, 1991).

Utopian imaginaries also often reflect the myth of a "Golden Age," in the past or future (or on another planet), of which the home society is at best a pale shadow, requiring reform, revolution or regression. Golden ages set in the past tend to be articulated by conservative forces bemoaning changes in social mores and their loss of power and influence, as other, competitive groups have risen in wealth and status. Golden ages set in the future emerge from revolutionary thinkers, who imagine either a fully-reformed society or one so technologically-advanced that no wishes go unfulfilled (or both). Let us recognize the *Deus ex machina* implicit in these visions: something transcendent must save us and can, if only it is wished, willed or invented.

Not everyone is so sanguine about the elision of politics from utopia. According to Klein (2001: 470–71), Arnold Toynbee believed that utopias "negated history through apocalyptic leaps into a timeless past or eternal future." Others have noted the apolitical character of such imaginaries and even suggested they might be prone to rule by elites or dictators. It is telling that utopian imaginaries are frequently governed by intellectual, scientific or religious elites, who are experts in one thing or another and make all important decisions (e.g., Wells, 1933. Plato's *Republic* also has this character). Politics are trumped by wisdom and technological plenty, at which point, there is no longer anything over which to contend or struggle.[7] Yet, in suggesting that harmony is desirable, utopian imaginaries create hopes and illusions about possibilities even as they ignore questions about who has power, who decides what matters and who does not (certainly, this would include both author and readers).

In this essay, I am concerned primarily with ecological utopias or "eco-utopia." An eco-utopia is a imagined time and place in which humans and nature co-exist in some kind of sustainable, socially-reproductive form, and in which the activities arising from human social practices do not appreciably affect the reproductive capabilities and cycles of nature (and vice versa). In many definitions of "sustainability," such a condition is cast in terms of a "balance" between nature and culture, globally if not locally, that can be achieved either by transforming human nature or deploying appropriate technologies (Lipschutz, 2012). Have such places or times ever truly existed?

Arguably, the first eco-utopia was Eden before the Fall, in which harmony and plenty were the rule, and balance between humans and nature was a given (Giesecke and Jacobs, 2012). But as a definition, "balance" elides a number of problems and questions: What is the relationship between nature and society? What is to be balanced? How is balance to be assessed? Who has power? Who decides (as Humpty Dumpty would put it)? These questions are rarely addressed in full. Ignoring them seems to make them go away—which is clearly not possible.

Most eco-utopian (and utopian) tales imagine new and necessary social structures as emerging logically and inevitably from specific fixes or devices: if people can be brought to ecologically-sustainable thinking and acting, all else must follow; if technologies can ameliorate or compensate for the ecological impacts of human behaviors, all else will follow, too (Callenbach, 1981). What most eco-utopian narratives eschew are politics and power, because with "right thinking," many believe, harmony follows and (disruptive) politics is unnecessary. With the "right" technologies, distribution is no longer a problem and, again, politic becomes superfluous, in as much as everyone can be happy and their appetites satisfied. To be sure, not all science fiction writers have ignored politics—see Ursula Le Guin, Octavia Butler and Samuel Delany, for example—but such matters tend to be elided or ignored in most eco-utopian stories, perhaps because so many have been written by well-off, middle-aged white men: as Ursula Le Guin (1989) put it, "Utopia has been euclidean, it has been European, and it has been masculine" (see also Bebergal, 2015). This leads us back to the dystopian conditions that exist today, especially across the Global South, but also in the Global North, and that are to be solved, whose solutions reflect the desires of powerful corporate and economic actors (generally European and American males) rather than the needs of those most affected by those conditions (the poor, people of color, women). As suggested earlier, the four novels discussed in this essay are no different: they are "post-solution" and say nothing about the politics of transition.

III. Tales of California's Future

The four eco-utopian novels are bound together not only by being set in California but also by the "tricks," described above, that permit the authors to largely elide social and political struggle. Political struggle can be a long and drawn-out affair (see *Pacific Edge*, below), and no one wants to impede the flow of narrative with detailed accounts of tactics and actions (that is left to dissertations). Consequently, descriptions of political conflict are mentioned mostly in passing, and the reader is left to fill in the blanks.

In *The Earth Abides*, for example, the disaster that triggers the story simply happens, without any context. The author sends a UC-Berkeley geography graduate student, Isherwood Williams (aka, Ish, reminiscent of Ishi, the last surviving member of the Californian Native American Yahi tribe), into the Sierra Nevada on a solitary camping trip. There, he falls ill with a measles-like disease that delays his return to civilization for several weeks. Once back in Berkeley, however, Ish discovers that everyone has died of the plague—the equivalent of nuclear war—from which he has, fortuitously, recovered.[8] Wondering whether anyone else has survived, Ish embarks on a cross-country trip to New York, meeting small groups along the way but finding nothing to compel his settling down.

On returning to Berkeley, he meets a female survivor and, together, the two become progenitors of a group of people that tries to maintain the "civilizing process" by exploiting the objects and materials left behind by the dead. Inevitably, as these goods wear out, break down and disappear, the group finds itself agreeing less and less on what to do and depending more and more on nature. Ultimately, as literacy and industry decline, the group falls back into "primitive" ways. Ish lives to a ripe old age and becomes, in the eyes and beliefs of the group, its creator and god. At the end of the novel, after his death, Ish's tribe leaves Berkeley and crosses the crumbling Bay Bridge in search of greener pastures (presumably in Silicon Valley). Meanwhile, in the worlds of *Ecclesiastes*, "the Earth Abides."[9]

Among the best-known of the California-based utopian imaginaries is Ernest Callenbach's *Ecotopia*, set (if internet maps are to be believed) in a semi-mythical land stretching from San Luis Obispo in the central part California to Washington (or even into British Columbia). In many ways, *Ecotopia* is the seminal California utopia, catching a particular time, place and sensibility of the early 1970s. Despite the middling quality of the writing and its seamy, white male protagonist (who today might be deported for sexual harassment), it still captures the imagination and hopes of many who read it (Buhle, 2001). Callenbach even brings politics and war into the novel, largely as part of the backstory, but relies mostly on technology to account for "Ecotopia emerging" (Callenbach, 1981).

The book's subtitle is "The Notebooks and Reports of William Weston." Weston is a *New York Times* reporter sent to investigate the new country of "Ecotopia" two decades after California, Oregon and Washington have seceded from the United States (no specific dates are provided, but the time frame seems to be the late 1990s or early 2000s). At secession, Ecotopia broke diplomatic and economic ties with the United States, which imposed sanctions in return: each country is closed to the other's citizens. As a result, not much is known about Ecotopia in the United States, apart from occasional and distorted reports and rumors about life, society and politics on the West Coast (not that different from today, as revealed by any *New York Times* articles about life and politics in California). Washington, D.C. has fed the American public a steady diet of the threats that Ecotopia and its ideology pose to the American Way of life: it is socialist, limits consumption, advocates feminism—the president is a woman!—and is hot-headed and warlike. According to some, it is even prone to cannibalism.

Weston is sent to ferret out the true state of affairs. He is smuggled across the Ecotopian frontier at Reno (Nevada is still part of the United States), takes the bullet train from Tahoe to San Francisco (Ecotopia's capital) and is wowed by the new country's many different and innovative features and practices (there are no seats in the train;

people lounge on pillows!). As he travels around Northern California, Weston discovers that everything he thought he knew about Ecotopia is wrong ("fake news," apparently). Instead, he finds an ecofriendly population and government deeply committed to a Green society and an ecofriendly infrastructure heavily-reliant on "appropriate technology."[10] Initially, Weston is treated with suspicion and he finds it difficult to shed the norms, biases and preferences that he has brought with him from the United States.[11] But, as he meets and interviews various people, sends articles about the new country back to New York, and even engages in the Ecotopian version of "war"—stylized combat between two groups of men, during which he receives a "heroic" wound—his view of Ecotopia begins to change. Predictably, perhaps, as he is about to return home, Weston realizes he is in love and decides to remain in Ecotopia.

Kim Stanley Robinson's *Pacific Edge* raises substantive questions about the politics required to achieve eco-utopia and offers an implicit theory of political change. The novel is set in 2065, near Robinson's childhood home, in the fictional Orange County town of El Modeno.[12] Like the rest of California, the population there has come to terms with "limits to growth" (Meadows, et al., 1972), and El Modeno has adopted the structures, norms and practices of an operating eco-utopia facing pollution and scarcity.[13] But these details are scanty.

The book is composed of two complementary narratives, one historical (taking place during the late 1990s and early 2000s), the other set in 2065. In the first, Tom Barnard—Robinson's alter ego—recounts the prison epiphany that turned him into one of the architects of and activists behind the ecological revolution, via a "long march" though American institutions, with the goal of completely overturning the ideological underpinnings of 20th century American society.[14] The second narrative tells of environmental conflict in the daily lives of a group of environmentalist friends living in El Modeno. The City Council is debating whether to overturn the town's "no-growth" policy and support a new commercial center on Rattlesnake Hill, the last open area in the town. Kevin Clairborne, the novel's protagonist (and Barnard's grandson), is deeply opposed to the project as inimical to the town's Green commitments and his group's sensibilities. Kevin and Tom lead a campaign against the proposal but, even after Tom drowns at sea in a storm, the Council and El Modeno's citizens vote in favor of development and the promise of economic growth and jobs. Kevin, however, does not end his struggle: he and his colleagues turn Rattlesnake Hill into a sacred space with a memorial to Tom, knowing that the town's citizens will not now countenance a shopping mall on the Hill. La lucha continúa!

Finally, Neal Stephenson's *Snow Crash* depicts a hyper-capitalist and libertarian "utopia," albeit not an ecological one, that would thrill Friedrich Hayek, Milton Friedman and the millions who believe privatization is the solution to all social ills. Everything in Stephenson's Los Angeles is privatized, has a price and is for sale—except for the remnants of the United States, derisively called "the Feds" which has been left with little public space over which to govern.[15] Indeed, the country has been broken up into little privatized sovereign bits called "franchulates" and "burbclaves," which rule themselves. Outside of these bits, mostly accessible only to the wealth, Los Angeles is a "national sacrifice zone"—it will not be remediated and has been abandoned to a dismal ecological fate. By contrast with the "real" LA, the "Metaverse" in cyberspace seems a near-utopia—at least for those who can afford access. There, all that can be imagined is possible, everyone is liberated from their earthy frailties and those who are poor and powerless in the real world can become rich and powerful.

The plot of *Snow Crash* is too complicated to summarize fully. The cast of characters is enormous, the machinations endless. Much of the action revolves around Hiro Protagonist, an unemployed code writer and pizza delivery person, and Y.T. ("Young Thing") a 15-year old, skateboard-riding, female Kourier. They and their allies in the Mafia fight one of the antagonists, L. Bob Rife, who wants to unleash a mind-destroying, "socialist" virus—Snow Crash—that will turn people, both on-line and off, into babbling, zombie-like cult followers. Rife's goal is to destroy independent thought and gain ownership of all information by eliminating people's ability to communicate freely with each other. Hiro, Y.T. and the Mafia manage eventually to defeat Rife and his followers and restore the libertarian *status quo ante*.

Snow Crash is an allegory more than a vision; Americans are already zombie-like followers of a semi-religious cult called "capitalism"[16]—more by necessity than by choice—and they appear to be losing the power of independent thought, as well. Indeed, *Snow Crash* might be a satire of the social utopia for which libertarians (and many Silicon Valley gurus) long: a world with no "Leviathan-like" state, in which individual initiative and enterprise can thrive and social problems can be ignored. Everyone is able to deploy their skills and knowledge to become rich and happy by selling whatever they might have to offer to those with the capital to buy it (however, see Lewis, 2017). In all of this, the creation of an eco-utopia does not loom large. But, of course, in the Metaverse, ecological degradation does not matter and, if the external world outside is an ecological disaster, so what? Escape is possible.

IV. Utopias? In California?

As noted earlier, one of the key moves taken by each of these (white male) novelists is locating his eco-utopia in California.[17] Three of them were/are from California; the fourth (Stephenson) from Upper Ecotopia (the Pacific Northwest). Why does this matter? California has a reputation not only as the home of many tech entrepreneurs and "first adopters" but also a plethora of "far out" beliefs and practices. California is a place known for its technological and social innovations, and anything and everything seems possible that would be unimaginable anywhere else. The H-bomb was designed in California, the information revolution got its start in Silicon Valley and, when there is water and work, parts of the state seem like the utopia imagined by the Joads and many others. Eco-utopias in clement California do not seem so far-fetched

(except for the earthquakes). But some eco-utopias are more plausible than others.

Consider the fate of Ish's people who, losing technological knowledge, skills and equipment, inevitably revert to a primitive (paleo) way of life (Reeves, 2017). A return to a Rousseauian "state of nature," with its "noble savages" is, even today, a widely-held dream (Harlow, Golub & Allenby, 2013: 275–76), and not only among paleo-ecologists. This trope is an old one that still exists: civilization is corrupt and corrupting; cities are unnatural; humanity is infected with a wasting disease caused by industrialism or capitalism or overpopulation or all three. Solving these problems is too difficult politically, so the cure is to kill the patient, by flood, fire, famine or flu. Plague much resembles the fabulous neutron bomb (Tobin, 2016), which kills people but leaves intact the buildings and their contents, although survival in the wake of radiation-dosed rubble of a nuclear war would pose daunting challenges, perhaps even greater than plague (Robinson, 1984). While Ish's people lack the capacity and skills to reproduce the manufactured necessities of life—which rapidly become superfluous, anyway—the ruins of civilization can be mined for a time, easing the transition. And with so few survivors, there is plenty for all. Eventually, however, those supplies will decay or run out, and what then is left except a return to a Nature, that, with time, will recover, allowing humanity to return to Eden?[18]

Stewart's abiding Earth, repopulated by its few survivors and succored by a benevolent Nature, has lost much of its cachet in recent years. The majority of contemporary films and novels about the end-of-the-world are distinctly dystopian, positing a landscape of ruin, a life of social Darwinism, and the war of all against all.[19] Inevitably, at the End of History, it is widely thought, most of humanity will be destroyed, with only a selected few permitted to enter the new millennial world (or Kingdom), perhaps on another planet or in another timeline. Again, goes the belief that, when there are so few people left, politics will disappear in the struggle to survive (as Hobbes might have noted). That humans might disappear completely from the scene, unnoticed and unmourned, does not figure into these dystopian narratives (unless, of course, a successor species appears to provide dramatic tension; Weisman, 2007; Canavan, 2016).

Even so, and even in post-plague California, Armageddon does not do away with domination of man and nature by men. One might think that, with a thriving and plentiful nature, there would be no need for some men to assert their power over others. Yet, even Ish and his tribe are marked by struggle, as dissenting followers rebel against his leadership only to be violently suppressed. Hierarchy is instantiated and social stability is restored, emerging from "natural" tribal relations, patriarchal principles and orderly succession. As the book ends, Ish hands his "skeptron"—a hammer, the symbol of his power and virtually the only functioning artifact surviving from before the plague—to one of his young followers. The world to come might be utopian or dystopian, depending on where one is in the pecking order. What that world will not be is a political one.

In *Ecotopia*, History has been mostly brought to a close, too. Technology, with a strong dose of naturism, has saved the day and promises, at some future date, to save the world. By comparison to the nightmare that the United States seems to have become, Ecotopia is truly Paradise—for most. Solar energy, bullet trains, desalination, extruded buildings, a "back to the land" ethic for those wishing to return to nature—what more could one ask? Except that Ecotopia is far from perfect. Its politics border on the authoritarian; African Americans have retreated to segregated enclaves in the cities; those who cannot accept Ecotopia as it is are asked to leave or are deported. Sexism continues apace, as demonstrated by the narrator's thoughts and behaviors[20]; aggression is ritualized, with men heroically throwing spears at each other; and people are not always happy with things as they are (Jacobs, 1997). There are even a few seditionists, who dream of a U.S.-sponsored restoration (much like the U.S. interventions in Latin America and the civil war in Brazil mentioned throughout the book).[21] Even in Ecotopia, nationalism requires enemies; without the United States as its nemesis, could Ecotopia even exist, much less survive?[22] But here there is no need to end the world in order to solve its problems, although not everyone is as enlightened on this point as is Ecotopia.

Ecotopia's survival seems to hang not on its social and political order but, rather, on its solar energy sources, the product of a technical "miracle," which is explained in the prequel, *Ecotopia Emerging* (Callenbach, 1981). In the midst of the energy crisis of the 1970s, oil seemed to be running out even as OPEC and the Seven Sisters wielded their market power over world politics. In those days, however, many thought that some new solar cell process would allow every person to become an electricity generator, that oil was under the control of inimical forces, at home and abroad, which must be defeated and that "peak oil" was only a matter of time.[23] "Energy independence" via renewables became the key to the Ecotopian revolution, producing energy "too cheap to meter" in words once applied to nuclear power. The miracle, in this instance, is created by Lou Swift (homage to Tom?), a female high school student from Bolinas, who has invented an easy-to-build solar cell that undercuts the prices of fossil fuels, especially oil. Unlike most self-interested Americans, Lou is concerned for society and, rather than seeking a patent on her invention, she releases the formula to the public, who can make their own solar cells.[24] As will be seen below, this conceit is very much a reflection of 1970s California and then-current fashions and trends (some of which still resonate today).[25]

Forty plus years later, solar PV is cheaper than ever yet there are also more fossil fuels than ever. The solar revolution, promised since the 1970s, is only slowly penetrating the market, as growing numbers of well-off homeowners put PV systems on the roofs of their houses (and producers build centralized solar generating plants). The price of PV has plummeted and there are some number of companies that have staked their future on bourgeois homeowners from whom the greatest profits are to be made. Once again, there is utopian talk of energy almost too cheap

to meter, the product of an enlightened capitalism. All of this is accompanied by corporate and entrepreneurial talk of smart systems and cities and the so-called Internet of Things that will usher in a green, utopian future.[26] But there is resistance, too. Electric utilities fear decentralized home generation as a threat to their business models and grid stability, and are trying to cap rooftop PV growth (and the fossil fuel industry seems willing to fight to everyone's death, if need be). In the real world, the political struggle for Ecotopia continues (Walters, 2017).

Snow Crash appears as an anomaly in an essay about eco-utopia, but it can be read as a parable of "eco-modernization," the proposition that green and clean technology will save the world and usher in the Millennium (Hobson & Lynch, 2018). As cyberpunk, *Snow Crash* is an exuberant work, although 30 years later, it seems somewhat dated and even tame, especially compared to the work of others in the genre (e.g., Stross, 2005, 2006). As a California-based imaginary, however, it remains timely, especially in its dialectic-like synthesis of utopia and dystopia in the quintessential California city, Los Angeles (Boehm, 2004)—and who can deny that today's California offers such syntheses? In the online Metaverse, all dreams and desires can be realized. "Really-existing" Los Angeles is far less attractive. Hiro Protagonist, one of the protagonists, loses his job as a pizza delivery man for the Mafia and lives a hand-to-mouth existence in a storage locker. Y.T. is locked up in the Hoosegow (the other private jail is The Clink) for a sovereignty violation, but gets broken out and regains her freedom as a skateboard Kourier. By contrast, her mother is virtually a slave to the Feds and paid a pittance for her efforts. National sacrifice zones abound, and companies struggle with each other for control of highway intersections, resources and revenues. Most cyberpunk novels are not satirical and Stephenson himself seems deeply invested in a cyberspatial future[27]—but *Snow Crash* is something a warning that everyone is susceptible to cognitive utopian "viruses," such as the fetish of free markets and illusions of individual liberty.[28]

Technology—whether hardware or software, metal or flesh—dominates *Snow Crash*. Dystopian Los Angeles is a product of particular technologies of Foucauldian government and high libertarianism, while the utopian Metaverse is subject to a different technology of government, computer code (Bratton, 2015: 20–40). There is considerable struggle in both realms, although little or none of it is political in any real sense. The only relevant question is: who has the better weapons (the guy with the nuclear weapons or the Mafia?) and more robust code (Rife or Hero?). Politics is foreclosed by technology. In his article "Do artifacts have politics?" Langdon Winner (1980) identified technologies that elide politics by seeming to render politics moot by "settling" contentious issues. This is what Stephenson's technologies do in *Snow Crash*—certainly, the ethics of extreme libertarianism or distributional issues are never questioned by anyone, whether good or evil and, when everyone is a sovereign, there can be no politics. If *Ecotopia* reflects the utopian mentalities of the 1970s, *Snow Crash* does much the same for the 1990s and after (minus the Cold War).

Are all eco-utopian authors so averse to politics? *Pacific Edge* is notable for the role of ongoing political struggle as a necessary element on the road to eco-utopia. There are few technological miracles apparent; plague (or some other *Deus ex machina*) is not required to bring about anything like a utopian society. To be sure, El Modeno is by no means an idealized eco-utopia; in its banality, it is not even a way station to a fully-utopian imaginary. In failing to achieve either, however, El Modeno hews much more closely to really-existing life in California today and, probably, in the future. The characters are faced with the minor challenges of daily life, work is generally a pain, and eco-utopia does not emerge automatically from good intentions. Even if it is 2065, *Pacific Edge* does not look that much different from today.

The two narratives in the book illustrate both heroic and banal politics. Recall Tom Barnard, Robinson's *alter* who comes of age in the early 21st century. Tom's history appears as a backstory, written into the novel as a series of italicized excerpts (perhaps from a journal). These excerpts describe his deportation from an insular, xenophobic Switzerland to a neo-fascist United States, where he is imprisoned as a dangerous radical. While in prison, Tom decides to take on a political struggle for eco-utopia (evoking here, perhaps, Antonio Gramsci's imprisonment by Mussolini, during which he wrote the *Prison Notebooks*). Tom's first action is to "change the world in my mind" (Robinson, 1990: 93), rejecting what he calls "pocket utopias," those that are nowhere and closed to outsiders (Harvey, 2000). Instead, Tom writes that the struggle for utopia must be an historical one; it cannot and will not simply happen because people dream of it: *"Utopia is the process of making a better world, the name for one path history can take, a dynamic, tumultuous, agonizing process, with no end. Struggle forever"* (Robinson, 1990: 95, italics in original).

Fifty years later, the struggle continues in El Modeno, albeit as a much less momentous one. Oddly, the town is itself something of a "pocket utopia" whose position in the surrounding society of Southern California is left unclear (does eco-utopia extend beyond the city limits?). On the one hand, there are intimations that Tom has succeeded in his struggle, at least on a broader scale; on the other, the economic system is still capitalist and centered on private property (no socialism there!). If El Modeno is to sustain its eco-utopian character, however, it must seek new sources of revenue to pay for the services it provides, and the city looks to development of Rattlesnake Hill as a means of adding to the tax base. Kevin fails in his political struggle to prevent the project (softball seems to be a clumsy metaphor about the need to keep playing the game and winning the next round). Only Tom Barnard's disappearance at sea allows Kevin and his friends to sidestep politics and declare the Hill a sacred space, off limits to developers. *Deus ex machina* again!

This unsatisfying denouement is characteristic of many of Robinson's novels: never-ending political struggle means that he often cannot provide a compelling resolution. He is wont, instead, to invoke political miracles (much as in the famous *New Yorker* cartoon, in which a

crucial step in a scientific formula is labeled "Then a miracle occurs"[29]). Tom Moylan (1995: 9) tries to put Kevin's failure in a positive note:

> In tracing the politics of the movement, Robinson meditates on the need to disperse control by means of a structural division of responsibilities among transnational and local units, and a temporal one that extends the larger political project into succeeding historical periods. In addition, useful theoretical and practical analyses and methods are drawn from a range of sources: including ecological, feminist, and Marxist theory and practice, but also capitalist insights on self-interest and methods of market development.

Robinson might be granted such breadth, although I think Moylan regards the book as much more theoretically sophisticated and complex in its politics than it actually is. Whether "thinking globally, acting locally" amounts to a political program is open to question—one to which I return in the following section. "Another world is possible," but the world still has no idea how to get there, within California or without. And, in today's hyper-cynical political environment, the notion of "struggle forever" seems exhausting, not to mention unlikely.

V. Eco-utopias? In California?

The four novels thus offer clues to eco-utopia but no definitive roadmap. What they elide, and what we must be sensitive to, is the hard work of politics and struggle, both within the community and in the world outside. By positing post-transition worlds, the authors avoid having to discuss this hard work. After all, these are fiction; authors have no obligation to teach their readers anything (but tell that to Ayn Rand's minions, all of whom have read *Atlas Shrugged*).

What about the real world? Are there any eco-utopias in California today? Did they ever exist? And where have they gone? During the 1960s and 1970s, many people set up or joined voluntary communities (aka, "communes") based on utopian principles. Few survived and those that did don't have much to offer in the way of politics (Gopnik, 2018). It is telling that, today, many who would have been part of the counterculture 40 or more years ago are headed, instead, to Wall Street or Silicon Valley. The most compelling utopian imaginaries emerge from the latter, projected into outer space (Elon Musk's Mars project) or cyberspace (the "singularity" of Ray Kurzweil and others). These utopian projects appear in response to what is thought to be almost surely a dystopian future of one kind or another, caused by comets and asteroids, environmental catastrophes, extinction events and similar disasters. One common response is that humanity must escape, to Mars, to Proxima Centauri, to a world of unlimited life and artificial foods (Heise, 2015). Alternatively, everyone's body must be digitized and uploaded into the cybersphere, where humans can exist as immortal, autonomous bundles of electrons, whatever the state of the outside world. Maybe these utopias will be eco-friendly, maybe not. Who can tell and who cares? They do seem to follow the dictum "Earth First! We'll mine the other planets later."

There is one aspect of these contemporary imaginaries that is worth noting: they are designed for individuals rather than society or civilization as a whole (Anderson, 2007). Heroic individualism has been a central feature of American liberalism since the country's founding and, since the 1980s, the well-being of society has been given short shrift in favor of the individual. The centrality of high individualism in life and literature reflects a flight away from real world power and politics, a flight characteristic of most, if not all, utopian experiments and imaginaries. In the end, power disappears even from a political utopia such as that depicted in *Pacific Edge*. But the elision of power is an illusion: it only *seems* to disappear from worlds in which each individual can become an autonomous entity unaffected by or beholden to anyone else (Bratton, 2015). Power, as Foucault reminds us, never disappears.

Indeed, the rise of individualized utopias and eco-utopias, emerging from Wall Street and Silicon Valley, is prefigured by the very same counterculture of the 1970s in which Callenbach and his contemporaries were immersed. This is reflected in the first edition of *The Whole Earth Catalog 1968*. The *Catalog's* progenitor, Stewart Brand, wrote there that:

> We <u>are</u> as gods and might as well get used to it. So far, remotely done power and glory—as via government, big business, formal education, church—has succeeded to the point where gross [sic] obscure actual gains. In response to this dilemma and to these gains a realm of intimate, personal power is developing—power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested (*Whole Earth Catalog 1968*, p. 3; emphasis in original).

Brand and the Whole Earthers were deeply interested in the personalization of the new electronic technologies emerging from the U.S. defense industry, especially computers, which were shrinking from building- and refrigerator-size versions into mini- and micro-computers that could be used at home (Apples' Steve Jobs and Steve Wozniak were products of this mentality). But they also saw more prosaic technologies and practices in terms of individual liberation—an ironic turn given Herbert Marcuse's *One Dimensional Man* (1964), which railed against such illusions.

Fred Turner goes so far as to argue that the liberationist techno-visionaries of the Whole Earth era were actually left precursors of what is, today, neo-liberal high individualism, libertarian technologism and start-up heroism. He (Turner, 2013: 43, 44) writes that:

> [In *The Whole Earth Catalog*] we can…explore a world whose citizens have largely turned away from the traditional political mechanisms of law making and institution building toward the

> building of communities based on shared tastes and social networks... To the extent that these politics and techniques grew out of the communalism of the 1980s, however, the *Catalog* should also be a warning.

This "turning away" is exemplified today in Silicon Valley's endless efforts to "make life better" for individuals through the "Internet of Bodies and Things," as well as in the flood of apps and devices of doubtful utility with which consumers are daily inundated. The apotheosis of Brand's vision of "intimate personal power" is reflected in Ray Kurzweil's "singularity," that point at which, some speculate, it will become possible to upload individual consciousnesses into the electronic web (Stross, 2005, 2006). The end of material existence will signal the end of hunger, poverty, scarcity, injustice AND politics—or so it is advertised—ushering in a truly utopian age (although no one seems worried about how to provide energy to all the servers required or about what happens during power failures).[30] Still, a string of films and novels, most of which are NOT eco-utopian, warn us that, when the machines take over, they are not likely to be friendly to their creators or the environment (and, see Brundage, et al., 2018). Machines won't much care about either humans or ecology, so long as they can stay out of the rain.[31]

Are California (eco)-utopias doomed, then, to remain nothing but far-fetched imaginaries? Are they unable to provide pathways to sustainability? Not necessarily. It is important to recognize that what is politically possible will not emerge from imaginaries alone; real projects must be based in the lives and lived experience of people in community and society, much as *Ecotopia's* publisher, Malcolm Margolin, wrote in the Foreword to the 40th Anniversary Edition of the book's first appearance.

> [In *Ecotopia*] I keep catching glimpses of a Berkeley I once knew. It was a world of experimental social and economic institutions: worker co-ops, consumer co-ops, food "conspiracies," and communes. There were women's groups; encounter groups that encouraged spontaneity, emotion, and honesty; the nation's first recycling program; organic gardening and a back-to-the-land movement.... (Callenbach, 2014: iv).

Those who lived in Berkeley in the 1970s and even the early 1980s (as I did) might feel similarly, but should not over-idealize that time and place, either. The Berkeley of Margolin's memory was also wracked by the Free Speech Movement, the Black Panthers, the 1969 student uprising over People's Park, state repression and a growing drug culture. Today, sadly, Berkeley does not look much like the kernel of an Eco-utopia, although many of the parts are present. Has the Ecotopian moment been missed? Is it yet to arrive? The myth of a Golden Age persists—if only people had acted differently then, the Golden Age might be here, now. But golden ages are an illusion although they are probably necessary for utopian dreamers.

VI. What are *we* to do?

In the 1960s and 1970s, faced with a widely-held sense of powerlessness in the face of a seemingly-implacable and terribly destructive technology, many believed a nuclear Armageddon to be only a matter of time. In 1983, amidst another public outcry against nuclear weapons, a group of Harvard-based "wise men" (yes, all white) sought to allay public fears by publishing *Living with Nuclear Weapons* (Carnesale, et al., 1983). The book is long out of print but, according to the archival website maintained by Harvard University Press (n.d):

> *Living with Nuclear Weapons* presents all sides of the nuclear debate while explaining what everyone needs to know to develop *informed and reasoned opinions* about the issues. Among the specifics are a history of nuclear weaponry; an examination of current nuclear arsenals; scenarios of how a nuclear war might begin; a discussion of what can be done to promote arms control and disarmament; a study of the hazards of nuclear proliferation; an analysis of various nuclear strategies; and an explanation of how public opinion can influence policy on the nuclear arms question (emphasis added).

There is nothing in there about nuclear abolition or anything more than making the best of a bad situation. Those who pursued a world without atomic weapons were ridiculed as utopian dreamers, imagining a world that could never be. A fearful populace was told "You cannot uninvent nuclear weapons" and "a world without nuclear weapons will be a world of war."[32] There was certainly nothing "peaceful" then, or today, about tens of thousands of deployed nuclear weapons, although the much-feared atomic holocaust has not come to pass. So far. Still, even in the face of such a threat, hopelessness was not an option. But that time gives us reason for hope today. Out of the nuclear threat there emerged anti-weapons and anti-nuclear movements whose short-term impacts were readily observable but which were not revolutionary in any sense of the word. Some countries "uninvented" their nuclear weapons and some anti-war organizations received Nobel Peace Prizes, demonstrating the power of idealism backed by political struggle.

Since the 1980s, the specter of climate catastrophe has become as visible and seemingly inevitable as nuclear war was a half-century ago, and there is widespread recapitulation of the illogic of Harvard's "wise men"—in mid-2018, a Google search for "Living with Climate Change" produced 140,000 hits (up from 97,000 in 2015). People are told they need to develop an "informed and reasoned response" to climate change. They are regaled with visions of technologies and incentives, such as carbon capture and emission credits, that will facilitate living with climate change. But they are also told that it is not possible to change the ways in which they live or the fact that the global economy demands high levels of consumption and emissions, which cuts directly against the need for massive reductions in carbon emissions (whose absence may make life on Earth impossible). "Adaptation" and "resilience"

have become the favored tactics: get used to it and don't expect anyone to help you.

The failures of state politics and international institutions to accomplish anything have left a widespread feeling that there is little individuals can do except to reduce their carbon footprints and sit tight. In a recapitulation of the 1980s, those who seek radical action and who want to revolutionize how the world lives are once again accused of being utopian and imagining a world that can never be.[33] As a consequence, there has been a turn to individual and community action, as though the larger world did not exist, in the hope that local efforts might, somehow, add up to global impacts.[34] A sense of powerlessness drives the search for new utopian imaginaries, similar to Stephenson's gated burbclaves, offering "sustainability" and "safety" for those who can afford such luxuries.[35] Others fall back on technology, positing tall ecologically-friendly buildings faced with hanging food gardens and walls of solar PV (Bacigalupi, 2015), served by hydrogen-powered bullet trains, personal rapid transit pods and autonomous vehicles, set in perfectly-groomed landscapes devoid of any blemishes or shanty towns. These visions stimulate a hope that someone will do something or invent something. *Someone* must be working on the problem. Such hopes are no more realistic than the high-tech, futuristic cities imagined during the 1930s or the underground cities of the 1950 (and no one asks what they would cost, in terms of money, materials and emissions).

The rise of sustainability discourse and climate justice since the beginning of the millennium might be thought to have revived notions of eco-utopian politics in the face of climate dystopianism and doom (Harlow, Golub & Allenby, 2013). Yet, these movements have been driven largely by visions of appropriate technology and voluntary simplicity, perhaps raised to the level of ethical and legal obligations to nature, rather than the required "struggle forever." I do not mean to ridicule or marginalize such movements: it is important to pay attention to their imaginaries and actions, since significant and meaningful responses are more likely to come from visionaries, such as Naomi Klein and those with whom she works (Goodman, 2017) than from politicians, high-tech imagineers and hard-nosed economists. This is not a call to eschew politics, either, especially since utopian visions, whether ecological or not, may function more as a motivations to action than really-existing possibilities. What are *we* to do?

Now, more than ever, activists need to be architects rather than bees—but where to begin? Almost two decades ago, David Harvey took on this question, arguing that activists were looking for eco-utopia in all the wrong places. In *Spaces of Hope* (2000), Harvey addressed the failure of *spatiotemporal* utopias, set in another time and place (as are the ones described herein) and pointed, in particular, to their apolitical and authoritarian nature as particularly problematic. He was also critical of "process utopias," which focus more on the local here and now in the hope that utopian models and practices in specific places today will, someday, spread to other places (along with the good feeling required) and eventually encompass the world. Such utopian imaginaries project an ideal, stable and static state of affairs that cannot be changed lest catastrophe follow:

> What the materialized utopianism of spatial form so clearly confronts is the problematics of closure and it is this which the utopianism of social process so dangerously evades. Conversely we find that fragmentation and dispersal cannot work, and that the bitter struggle of 'either-or' perpetually interferes with the gentler and more harmonious dialectic of 'both-and' when it comes to socio-ecological choices (Harvey, 2000: 196).

Harvey advocated, instead, what he called "dialectical utopianism," which does not and cannot create new worlds *ex nihilo* via the miraculous hand of God, the scientifically-informed social institutions so beloved by political scientists or the wondrous technologies of which engineers dream. Instead:

> The architecture of dialectical utopianism must be grounded in contingent matrices of existing and already achieved social relations. These comprise political-economic processes, assemblages of technological capacities, and the superstructural features of law, knowledge, political beliefs, and the like. It must also acknowledge its embeddedness in a physical and ecological world that is always changing (Harvey, 2000: 231).

But Harvey warned, once again, to be wary of purely community-scale strategies: "Dialectical utopianism must confront the production of 'community' and 'coming together for the purposes of collective action' in some fashion and articulate the place and meaning of this phenomenon *within a broader frame of politics*" (Harvey, 2000: 240; emphasis added).

What lessons for today, and for California's eco-utopian and sustainable future, might be taken from the novels discussed here and from Harvey's arguments? I see three. First, dystopia and despair are always easier to invoke than engagement with the hard political work of dialectical utopianism. The former require only business as usual; those who are well-off today will likely be well-off in the future, however business as usual is conducted. More critically, dystopias are already here, across the Global South in proliferating slums and disappearing islands and in the homelessness rampant in the Global North. Environmentalists would do well to pay more attention to those already-existing places than to fetishize carbon footprints (Lipschutz, 2017). Much could be gleaned about politics and social change if those dystopian sites were transformed into something better, thereby generating lessons and practices that could be incorporated into dialectical eco-utopian efforts.

Second, there is no technical fix that will shorten the path or the political struggle required—Fred Turner's warnings about the false utopianism of *Whole Earth* ring loudly here. Technological fixes, it is hoped, will render political struggle irrelevant or even unacceptable; all that is required to set things right is "political will"—an inchoate concept without much substance. Smart grids, cars, houses, appliances and all manner of energy-gorging and sipping machines and devices, yoked to an internet of people and things, will only provide the "intimate personal power" (Brand, in *Whole Earth* 1968: 3) to build more, buy more and throw away more ("kipple," as Philip K. Dick called no-longer useful stuff (1968)).[36] Ironically, perhaps, the world is already confronted with a "crisis of underconsumption," as income growth stagnates, manufacturing is offshored, and robots take over more and more middle-class jobs, as well as a crisis of overconsumption, as landfills close and China refuses to accept American plastic waste. The incentives to seek ways to consume more are strong; pressures to move to the steady-state or even negative growth are not.

Third, many of the technologies, social institutions and political skills required to pursue Harvey's dialectical utopianism are here, now, and must be wrested from the wealthy and powerful (as Tom recounts in *Pacific Edge*). Eco-utopians must mobilize for a "long march" through the institutions, some of which will oppose such activism (e.g., banks) and others which might not survive it (e.g., electric utilities). One prototype for such mobilization and action might be the Community Choice Aggregation (CCA) movement directed to establishing local electricity generation and distribution agencies (Hoffman & High-Pippert, 2010; Klein & Coffey, 2016), although these are by no means revolutionary. An example of how *not* to march through the institutions might be California's AB32—the "Global Warming Solutions Act"— and its sequelae, which give priority to the centralized renewables preferred by the state's utilities and energy companies, even as individuals seek false autonomy by breaking away from the grid with solar roofs (Brand, again; see Bell & Lipschutz, 2015).

Shortly before he died in 2012, Ernest Callenbach (2014: 173–81; Callenbach, 2012) composed an "Epistle to the Ecotopians" a document both despairing and hopeful. In it, he expressed concern that people would need to learn how to survive through "a century or more of exceedingly difficult times."

> We live…in a dark time here on our tiny precious planet. Ecological devastation, political and economic collapse, irreconcilable ideological and religious conflict, poverty, famine: the end of the overshoot of cheap-oil-based consumer capitalist expansionism.

Callenbach did not, however, call for revolution, preferring ecological metaphors of renewal:

> When old institutions and habits break down or consume themselves, new experimental shoots begin to appear, and people explore and test and share new and better ways to survive together….already we see, under the crumbling surface of the conventional world, promising developments: new ways of organizing economic activity (cooperatives, worker-owned companies, nonprofits, trusts), new ways of using low-impact technology to capture solar energy, to sequester carbon dioxide, new ways of building compact, congenial cities that are low (or even self-sufficient) in energy use, low in waste production, high in recycling of almost everything. A vision of sustainability that sometimes shockingly resembles *Ecotopia* is tremulously coming into existence at the hands of people who never heard of the book.

Was Callenbach then a hopeless idealist unto death? Perhaps not: others may be coming around. As hardened a California observer of politics as columnist and consultant Dan Walters (2017) recently asked, in *The Sacramento Bee*, "Could 'Ecotopia' fantasy become a reality?"

> California, Washington and Oregon, appear to be implementing, one piece at a time, Ecotopia's major tenets…. Some have described what's happening on the Pacific Coast as the erection of a "blue wall" – or even a "green wall" – as a barrier to unwanted political and cultural trends elsewhere in the nation. Could it even lead to the Ecotopian rebellion that Callenbach depicted, one that included development of a strong defensive military and even hidden, highly destructive weapons within United States' population centers to discourage any effort to reclaim the new nation…? where it leads is anyone's guess.

Wherever these experiments lead, the future will not arrive easily. There can be no eco-utopias in California's future—or anywhere else—without political struggle.

Notes

[1] I use the term "imaginary" somewhat differently than do Manjana Milkoreit (2017: 3, in this special issue) and Sheila Jasanoff and Sang Hyun Kim (2009, 2015, as discussed in Milkoreit, 2017: 2, 15). Greatly simplified, they seem to see imaginaries as projections of the present into the future, encompassing not only "climate" fiction but also the reports of the IPCC. The four ecological utopias discussed here—and utopian fiction in general—are not extrapolations of the present as much as commentary on and critique of the present. As this essay will make clear, utopias generally say nothing about the transition from the here and now to the future (or the past) and elsewhere.

[2] For a listing of California-based ecological counterworlds, see the interview with Kim Stanley Robinson (2013) in *Boom*. The original "Bladerunner," released in 1982, made Los Angeles the center of a grim dystopic vision of 2019, one anachronistically-reprised in the more recent "Bladerunner 2049." The apotheosis of the mix of utopia/dystopia can be seen in the 2013

film "Elysium," which situates utopian California on a space station and dystopian California on the ground in Los Angeles (which scenes were filmed in Mexico City). For a general discussion of dystopian tropes, see Fiskio, 2012.

[3] Although published in 1992, *Snow Crash* was clearly written toward the end of the Cold War and in the shadow of the implosion of the USSR.

[4] *Pacific Edge* is one of three novels set in Orange County, mostly during the 2060s. The other two are *The Wild Shore* (1984), a post-holocaust story, and *The Gold Coast* (1988), a vision of a dystopian, fully "automobilized" society. The genesis of the Trilogy is addressed in Csicsery-Ronay (2012) and Abbott (2003).

[5] Thus Samuel Butler's *Erehwon*, which is today also the name of a natural foods company based in Los Angeles (1872).

[6] One glaring exception to this might be "The Matrix," in which humans "live" in a simulacrum of late-20th century capitalism while, outside, dystopia rules.

[7] Marx (1845: Part 1A: "Private Property and Communism"): "in communist society, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner..." Nothing about struggle there.

[8] The conceit of global plague is relatively old, appearing first in *Le Dernier Homme* (1805), by Jean-Baptiste Cousin de Grainville and subsequently in Mary Shelley's *The Last Man* (1826), and further reprised in Richard Jeffries' *After London* (1885), M.P. Shiel's *The Purple Cloud* (1901) and Jack London's *The Scarlet Plague* (1915), among many others. Today global plague is a staple of journalistic exposes and novels about global threats that are too numerous to list here.

[9] Undoubtedly, Stewart drew inspiration from London's 1919 *The Scarlet Plague*, also set in Northern California.

[10] This was a term of art in the 1970s. During his first term as governor of California, Jerry Brown created an "Office of Appropriate Technology," of which little remains today. There is, however, a "National Center for Appropriate Technology" in Montana and around the United States (https://www.ncat.org/), whose primary mission appears to be providing technical assistance to small farmers and ranchers.

[11] Among these are a certain degree of misogyny and a view of sexual relations that offends the woman with whom he is falling in love. But that story takes a turn toward sexual fantasy which, as a result of the sexual revolution of the 1960s and '70s, appeared in many novels written by (mostly white), middle-aged men.

[12] There is a city called "El Modena" in Orange County, not far from the El Modeno plutons, which are extinct volcanoes.

[13] Robinson readily acknowledges the influence of *Ecotopia* on his book.

[14] The term "long march through the institutions" is often attributed to Antonio Gramsci, who was supposed to have created it while in Italian prison, although it was, apparently, coined by Rudi Dutschke, a German student activist during the 1960s. The irony of applying this to the United States is apparent: the long march through the institutions describes the fairly-successful conservative strategy of building the political right since the 1970s through think tanks and dissemination of soft libertarianism as the governing ideology.

[15] A more detailed summary and analysis of *Snow Crash* can be found in Lipschutz, 2010: 92–96.

[16] The scholarly literature makes it all too clear that vampires are the capitalists, while zombies are mindless consumers (McNally, 2011).

[17] Those who grew up in Berkeley or spent time there before 1990 will remember the Berkeley Farms' dairy slogan "Farms? In Berkeley?" Well, not any more. The company is now based in Hayward, California.

[18] This is also the dream of many who attribute all of the world's ills to "overpopulation." A reduction from 7.5 billion to 1 or 2 billion will restore humanity to Eden—except, who will do the dirty work?

[19] The "Mad Max" films illustrate this point. The most recent of the series, "Fury Road," could be regarded as a metaphor of life on the Los Angeles freeways.

[20] I once asked Ernest Callenbach about sexism in his book, which seems to have been rampant among male authors writing during the 1960s and 1970s (Roth, Bellow and Heinlein come to mind). He was offended by the question. In light of charges of sexual harassment and abuse being issued (as I write) against men who came of age during those decades, there does seem to be more than smoke present here.

[21] In 1975, the Church Committee (named after then-Senator Frank Church) began to publish its reports on the activities and sins of the American intelligence community, including its efforts to assassinate Fidel Castro with exploding cigars. CIA participation in the 1973 coup against the Allende government in Chile is virtually a given. Such activities were widely known if not admitted to by the U.S. government.

[22] Much like California's current resistance to President Trump's environmental and energy policies.

[23] *Limits to Growth* (Meadows, et al) appeared in 1972, warning of imminent depletion of virtually all resources by some time in the mid-21st century, while the first "Oil Crisis" took place in 1973. "Peak oil" draws on the work of M. King Hubbert— and someday it will come (maybe). See Steffen, Grinevald, Crutzen and McNeill (2011).

[24] This is reminiscent of Amory Lovin's (1976) seminal article on "hard" and "soft" energy technologies, published not long after *Ecotopia*, and revisted in Lipschutz and Mulvaney (2013).

[25] But there are anachronisms of a sort: Callenbach imagines corner news boxes that print out on demand, via fax, up-to-the-minute headlines. Given the omnipresence of Stewart Brand, it is surprising Callenbach

could not imagine computer-based communication of the news.

[26] Thanks to Alastair Iles for making this point.

[27] Or perhaps not. Stephenson himself is apparently dedicated to the wonders of technology and not everyone sees *Snow Crash* as satire. See Lewis (2017).

[28] One of the novel's antagonists, L. Bob Rife, seeks world domination and claims ownership of his employees' knowledge, skills and thoughts thusly:

> If you'll just follow my reasoning for a bit, that when I have a programmer working under me who is working with that information, he is wielding enormous power. Information is going into his brain. And it's staying there. It travels with him when he goes home at night. It gets all tangled up into his *dreams*, for Christ's sake. He talks to his wife about it. And, goddam it, he doesn't have any right to that information. If I was running a car factory, I wouldn't let the workers drive the cars home or borrow tools. But that's what I do at five o'clock each day, all over the world, when my hackers go home from work (Stephenson, 1992: 116).

[29] See https://www.flickr.com/photos/jpallan/4633000725. Verified 24 August 2018.

[30] No one stops, either, to ponder the number of servers and generation capacity required for this to happen, or the ecological damage it is likely to entail. See, however, Bratton (2015).

[31] As in "The Matrix."

[32] Carl Sagan and his colleagues developed the theory of "nuclear winter" in an attempt to scare the White House and Kremlin into reducing their nuclear arsenals below the numbers whose detonation would create such a "winter." Those same models were subsequently used to study the physics of climate change.

[33] See various commentaries (e.g., Cobb & Castuera, 2015) on Pope Francis's recent encyclical "Laudato si'—On care for our common home" (the encyclical can be found at: http://www.news.va/en/news/laudato-si-the-integral-text-of-pope-francis-encyc.

[34] This appears in the form of communities such as "Ecovillages." See, e.g., Litfin (2013) and the Global Ecovillage Network at http://gen.ecovillage.org/. Verfied 11 June 2015.

[35] The equivalents of this during the Cold War were probably the underground cities and bunkers in which a remnant population might survive until "living with nuclear radiation" became safe.

[36] In *Do Androids Dream of Electric Sheep?* another California science fiction dystopia that served as the basis for "Blade Runner," Philip K. Dick (1982: 57) invents "kipple," which is

> useless objects, like junk mail or match folders after you use the last match or gum wrappers of yesterday's homeopape. When nobody's around, kipple reproduces itself. For instance, if you go to bed leaving any kipple around your apartment, when you wake up the next morning there's twice as much of it. It always gets more and more.

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The author has no competing interests to declare.

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This is a single-authored manuscript; all contributions were made by RDL.

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