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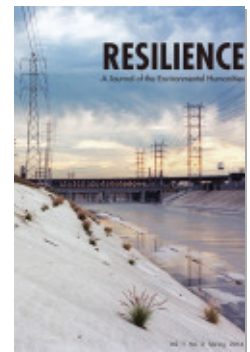
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Ecotopia 2121 AD

Sustainable Cities of the Future

ALAN MARSHALL

Introduction

Utopia can be described as an imagined or planned place on Earth where society is completely (or largely) resplendent with all things good and harmonious, and the individuals who inhabit it are content and happy. Utopian visions for cities have appeared in nonfictional form, in fictional form, and perhaps—on a very small scale—in reality.¹ The overall emergence of social harmony and individual happiness in any utopian city is sometimes based on a single feature (the abolition of human pain and suffering, for instance, or the achievement of full employment) but it is more likely to be posited in a multidimensional manner involving many features. To chart the overall character of an archetypal utopia in an economical way, please allow me to list some common (although by no means universal) themes that have been explored in past narratives about utopian cities:

social cohesion and tolerance melds together seamlessly with “human nature” and personal freedom;

peace and love overcome war and hatred;

religious unity (or acceptance of religious diversity) allows for great personal growth and spiritual transcendence;

material welfare is achieved for all without recourse to greed or exploitation; and

work (if it exists) is almost always enjoyable and human life is almost always satisfying.

These characteristics have been distilled from around the globe and across the centuries from various writers of various political hues.² Their listing here is meant to quickly convey the (now rather tradition-alized) civic principles that utopian writers have sought to develop—and the sort of civic principles that the following designs may aspire to.

Utopia is, of course, a centuries-old concept. Thomas More coined the term in the sixteenth century as he used it as the title of a book and the island paradise described within.³ He was being intentionally ambiguous as he used the word “utopia,” however, since in the process of bringing it from the Greek language into an English form, it could refer to either a “good land” or a “nowhere land” (or, indeed, both).

To design a utopian future often means to be at once imaginative and optimistic but also critical and subversive. Thomas More carved out the template to this enduring pattern when he painted his own optimistic account of an idealistic Christian utopia, within which was embedded a subtle and subversive critique of Henry Tudor’s England. Since then when utopian thinkers have set out to design or discover the best possible world for tomorrow, it is usually believed they are probably being critical, even cynical, about their own present-day society, cloaking their master planning in either seductive hope or biting satire.⁴ This is the same impulse that flows through the utopian designs presented below, as I seek to imagine utopian cities for approximately one hundred years hence.

Attitudes toward the utopian impulse in art and academia have shifted around over the past decades and centuries. Sometimes utopianism has been regarded as being unproductive fantasy—or even dangerous because it takes focus away from social reality. Others see utopian idealism as a practical step toward social change; if only through raising awareness of problems and deficiencies (and thus, dangerous to some, all the same). My conclusion on this point, after this small study, is that utopian design experiments are a practical way of engaging the mind of all those who have lived in a city and might have ideas about how they can improve it.

Since the onset of the environmental crisis as a major social and political concern, utopian designs have also tried to add ideas of ecological harmony to those of social harmony and this type of utopia has been coined “ecotopia.”⁵ Many an ecotopian thinker would probably accept the basic principles listed above but they would say that ecological

principles must also be valued and adhered to. Thus personal freedoms and material welfare should be enjoyed without harming the natural environment (or depleting resources for future generations).

In an ecotopia the relationship of society to nature is changed somehow so that humans act to fundamentally preserve or defend either the entire biosphere or some facet of the natural world. The seven city visions presented below all attempt to do this in some way. They are chosen for their geographical and cultural diversity (including one in a city that does not exist yet) in order that the results of ecotopian theorizing may be examined over diverse settings. Each one of the designs contains a description of what the city's future consists of, and also some explanation of how they may transform from what they are today to how they may be in 2121.

The future of the chosen cities is presented in a form of scenario art. Scenario art was recently announced to be a new and developing methodology for futures studies; and a formalized way to get decision makers to explore alternative future plans on a small or large scale.⁶ I take note of this way of imagining, debating, and communicating decisions, but acknowledge that art—in theory and in practice—has often reveled in intense reflection and speculation over and above any practical factors.

Wellington 2121

Wellington, New Zealand, faces a double whammy of two significant future threats that comprise human-induced climate change and a mighty natural disaster of a seismic nature. One historical precedent that may predict the latter is the 1855 earthquake, which changed the coastal outline of Wellington forever—raising many square miles of new land from the sea, upon which the modern CBD (central business district) was eventually built.

Before British colonization of the area there were many such seismic events. Archeological evidence shows that Maori settlements had to be repeatedly abandoned in the Wellington region because earthquakes changed the layout of the coast and demolished hunting and fishing patterns that the indigenous settlements had depended upon.⁷ Most geologists believe that the same sort of landscape-changing event is sure to recur sometime in the future, lifting great swathes of land up higher or lowering them down further into the sea.⁸



Fig. 1. Wellington 2121. Illustration by author.

Accompanying the seismic shifts Wellington's water line will also probably change drastically because of sea-level rises caused by global warming, and this may mean the erosion and drowning of the low coastal areas of Wellington by 2121. The eroded and drowned sections of the city will probably include the area in which the city's embassies, banks, and government buildings are currently located, along with the areas hosting the airport, the seaport, and the only highway that connects Wellington to the rest of the nation. Immediately after such an epochal change, it's probable that many Wellingtonians will make their way elsewhere, but many will also choose to stay.

To recover after such a tumultuous and isolating future, this design looks to the cultural history of the region. New Zealanders are said to be proud of their agrarian heritage; after all, the nation became a very prosperous country in the late nineteenth century through the farming industry.⁹

More recently many New Zealanders have become proud of their nation's association with the cinematic representation of Tolkien's imaginary *Lord of the Rings* world.¹⁰ This affection is such that for a week each year the Wellington city council renames the city "Middle Earth," during which time various small-scale and large-scale motifs from the *Rings* movies adorn the city's buildings and squares, like some pagan festival of the arts.

In this design for Wellington's twenty-second-century future, a "Shire"-esque communitarian-type settlement emerges and is developed into a real-life extended village in the Wellington hills. Here in

this post-disaster zone the central government has abandoned the remaining residents to let them run their own affairs, allowing them to harvest energy from Wellington's abundant winds and trade in domestic agricultural produce—as in the days of old.

In such a scenario formal education has wound to a halt, but in its stead apprenticeships abound in the arts and crafts of aquaculture, viticulture, and boatbuilding. This enables young locals to develop an enviably productive and quietly profitable lifestyle (yet those seeking a more exciting way of life can build a boat and sail freely to the South Island, visible afar).

According to Oliver Markley, most modern societies are probably heading for new civilizational epochs in the twenty-first century, and they are likely to get there through a cascading series of grand disruptions, or “mega-crises.”¹¹ This may well be the future for Wellington—as it is bound to be physically and economically challenged by a mixture of seismic and global warming events.

After such mega-crises, Markley suggests, cities and nations hopefully will recover with a wiser sense of how to avoid the same crises again. We can hope Wellington's post-disaster future may allow for such a transformation, and in this design, the architecture of Wellington also undergoes transition. To survive future earthquakes, architects opine that single-story buildings—such as those presented here—are the most durable and resilient.¹² Thus, whereas now Wellington boasts more skyscrapers than any other city in the country, it will be distinctly “low-rise” come 2121 AD. Meanwhile small-scale technologies and indigenous Maori craft become prevalent as they are the technologies and arts that serve this new low-tech, down-to-earth city far more usefully.

We, who stand here in the early in the twenty-first century, see that some communities already show willingness to develop small-scale and soft technologies and crafts to provide energy and food and also full employment.¹³ After a mega-crisis, such crafts and technologies will probably become far more extensive.

This social background sounds like it will be a bit dull for some youth, who could be easily seduced by the bright lights and opportunities of other New Zealand cities. However, while the other cities may sell dreams of high living standards, they will not be able to provide full employment or freedom from low-paid wage-slavery and rising debts—the reality today for many urban youth—so this Wellington of 2121 may well be attractive to young New Zealanders.¹⁴

Cities, in the classical sense, are localized centers of activity and over the past few centuries the industrializing world has seen millions of people move from traditional rural settings to modern futuristic cities.¹⁵ Over the same time period small villages have transformed into large metropolises. This pattern is not followed here, however, in the Wellington of 2121. The city will have moved from what is currently perceived as a modern city toward a traditional village-like settlement. Of course if you were to ask a local person from Wellington 2121 why they choose to go back to the past, they may well be confused by such a twenty-first-century question. This is not backward, this is forward; this is the way to survive and to be happy.

Minsk 2121

The energy politics of post-Soviet Europe is dominated by Russia. As Russia pushes its hydrocarbon economy upon its neighbors, there is usually little desire or little power to resist. Thus, in Minsk, the capital of Belarus, nobody is taking global warming too seriously, as to do so might affect economic success of the country they most depend upon. In any case the winters of Belarus continue to be frigid cold, and a few degrees' rise in global temperature—Belarusians are likely to believe—will not put a halt to that. Therefore the current government of Belarus, led by the autocrat Alexander Lukashenko, follows the Russian disdain for the Kyoto Protocol.¹⁶

For seventy years, the Belorussian people were forced to be a part of the Soviet empire and since becoming independent in the 1990s, they have often been pressured to dialogue with Russian authorities about a possible reunion with Russia.¹⁷ By the late twenty-first century, the pressure will have become too much. The need for Minsk to rid itself of crippling financial debt, and to secure cheap Russian gas, will probably have brought Belarus back into the Russian Federation.

A strong desire for independence is likely to linger on, however, and in 2121, it will be manifest in a strange architectural form. To rely less upon Russian gas for heating their homes and offices, nationalist Belarusians will cover their buildings with a furry insulation material that mimics the local variety of brown bear.

Belarusians nowadays resort to exhibiting lit candles in their windowsills if they choose to demonstrate against their strong-armed government (this is a popular practice when citizens want to pub-



Fig. 2. Minsk 2121. Illustration by author.

licly protest against Lukashenko's ongoing imprisonment of political opponents).

It is an ambiguous action, to be sure. A lit candle in the window could signify a plethora of meanings, usually spiritual rather than political, but this protest leaves them less likely to attract negative attention from the secret police.¹⁸

At the moment most Belarusians are more worried about surviving the winters and various financial crises than about bringing democracy to their land, but when Russia subsumes their country into a greater federation once again in the late twenty-first century, the "Bear Fur roof movement" will grow to become a tangible, if at first ambiguous, sign of

resistance to Russian control. Soon anybody with a gripe against Russian authority in the whole of Eastern Europe and Eurasia will be insulating their roofs in this manner, as an act of defiance against the Russian gas-powered hegemony. At the same time they will be striking a blow against greenhouse gases. One day, sometime around 2121, utopia will come to Minsk as greater Russia breaks up once again, allowing Belarus to be independent once more.

Los Angeles 2121

There's a well-known series of newspaper photographs from 1950s America showing a pyramid of defunct and decaying streetcars stacked one upon another as they crumble in a vast Los Angeles junkyard. During the 1940s and 1950s, the Los Angeles streetcars were systematically bought up and then closed down and dismantled by a group of conspiring companies led by General Motors. The whole affair was conducted below the radar of the American public through support of the conspiracy by newspaper magnate William Randolph Hearst.¹⁹ The photographs of the stacked streetcars serve as the visual statement of a defunct LA public transport system.

Some argue that the deliberate destruction of streetcar networks was part of a larger strategy to push the United States into automobile dependency. Only now, some sixty years later, are streetcars being resurrected as a form of mass transit in Los Angeles but this, too, is proving something of a battle.²⁰

In a post-Peak Oil era of the future, however, some sort of public transport must necessarily take the place of the automobile as the primary form of commuter transportation since the price of oil will make it impossible to run a petroleum-powered car.²¹ In this utopian design for a Los Angeles of 2121, streetcar networks make a big comeback as a major transportation organ. They are supported also by the closure and redevelopment of the highways. Instead of being pathways for vehicles, LA's highways are converted to vegetated greenways for pedestrians and bicycle traffic. The highways also act as a network of ecological corridors connecting populations of wild plants and animals that would otherwise be separated by human-made barriers such as roads and buildings.²² Some of the highways also allow for solar-powered cable trains as another form of transport.

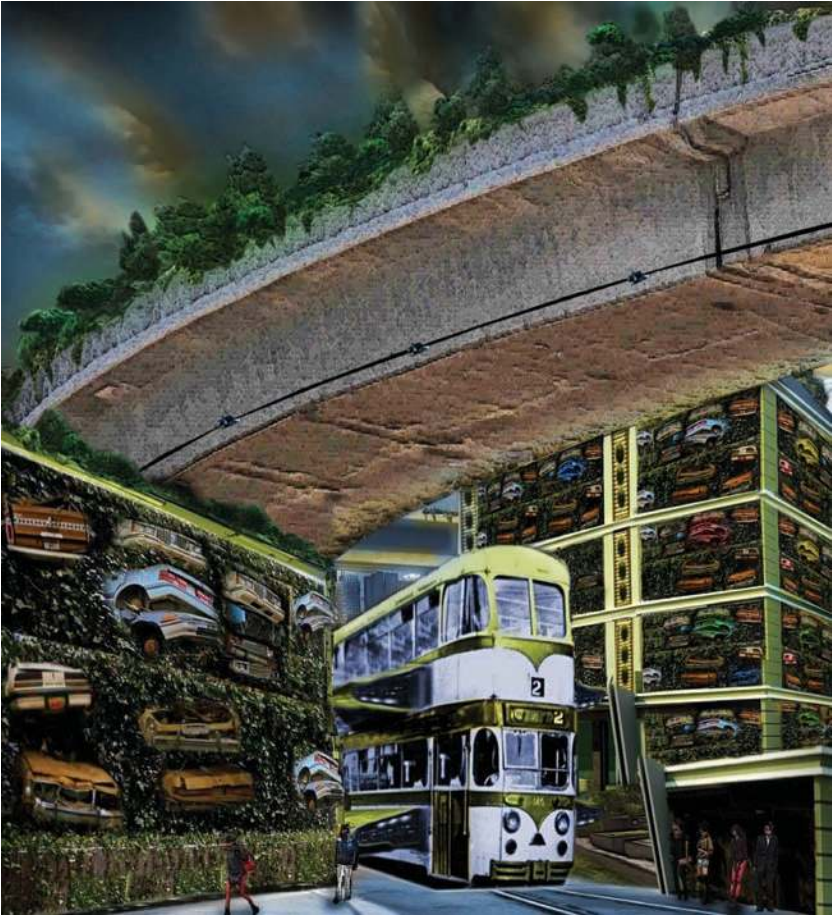


Fig. 3. Los Angeles 2121. Illustration by author.

In this scenario, automobiles are confined to the role of filler in new high-density eco-housing; a regime that counteracts the troubles of urban sprawl and encourages more enjoyable commuting experiences.

The idea of designing towns to forgo massive motorways and unsustainable suburban lifestyles is, nowadays, integral to the planning schemes of America's New Urbanism.²³ New Urbanists have a penchant for designing affordable livable communities, where everybody can walk to work, or to school, or to the café or park just down the street. By the mid-twenty-first century, their town-planning designs may prove so popular that megacities such as Los Angeles will become converts to New Urbanism—thus paving the way for the utopian future presented above.

But how can streetcars and forested walkways possibly serve a city of five million? Since global warming will likely degrade LA's ideal climate, it becomes a less attractive place to live and so there are bound to be fewer lifestyle Americans choosing LA as their preferred home. Climate change may not substantially alter the blue skies or proximity to the beach and mountains, but it will pose four tangible threats:

the summers will probably grow much hotter;
the air will probably turn much smoggier;
there will probably be many more fires; and
there will probably be much less water.

The extra expense to contend with all of these adversities will likely impoverish the public purse as well as the finances of private landowners.

Those that do stay in Los Angeles in the early twenty-second century have the opportunity to try out the green walkways, and find their commute less crowded, much cheaper, and generally quite pleasant. Not only are people happy to be rid of the junkscapes that an automobile city forces upon their lives, along with accompanying pollution and risk and stink and noise, they are also wealthier because they do not have to spend so much money to buy and run their own car.

Another way that greenways and pedestrianism are encouraged and supported is via piezoelectric walkways. Such walkways harness the pressure of "stepping energy" upon the ground surface, converting it into useful electricity.²⁴ Some of this is used to service the walkway's energy needs (for lighting, water-pumping, waste disposal, and so on) but any surplus is credited to the energy account of the person doing the walking. Thus you can pay for your electricity bill just by walking around the city; and the more you walk, the greater the credit you can earn. Indeed, a professional walker might earn a livable wage if allowed to swap his or her credits on a free market. One side effect is the increased health of the LA populace, saving the government lots of health insurance costs while increasing the happiness of individuals to utopian levels.

Singapore 2121

The Lion City was born to trade and the little problem of global sea-level rise will not stop this.²⁵ In this Singapore of the future, the city



Fig. 4. Singapore 2121. Illustration by author.

floats above the eroded islands of the Singapore nation within a NASA-like “Closed Ecological Life Support System,” the sort of system designed for building space stations and moon bases. It is often claimed such technologies are able to run autonomous recycling systems (involving self-contained atmospheric management, plant growth, waste management, and water recovery).²⁶ It is also usually claimed that research into such systems has practical application to Earth situations, therefore NASA or the Singapore Space Agency would be well equipped to engage in a project like this—especially given Singapore’s interest and experience in other space projects.²⁷

So what has to change before Singapore can get from now to then? The answer: almost nothing. Mega-projects such as these will suit the showy authoritarian style of Singapore's government, a virtual one-party state in which the People's Action Party leads and others must follow. Singapore just has to keep getting richer and richer and invest in ever more elaborate mega-technological projects year after year in order to

train their engineers in the requisite skills to develop airborne cities; showcase technology as the true manifestation of progress and civilization; and endeavor to make Singapore fly above its South East Asian neighbors (both literally and figuratively).

These things, done in concert, will keep the Singaporean citizenry in a state of quietism, encouraging them to believe that their nation is on the right track to the future.

It is likely that most of Singapore's currently fancied mega-projects, even the ones portrayed as "eco," will not stop global warming and may actually contribute to it.²⁸ In fact, in 2121 the world's changed climate may make the future environment quite horrific for many people living in Asia—with floods, droughts, food shortages, and energy shortages becoming more common.²⁹

If present trends continue, by the early twenty-second century the equality gap on the island nation will be even wider than it is today. The wealthiest Singaporeans will be able to buy their way out of environmental crisis. The poorer workers, the unemployed, and the large immigrant population will either have to lower their expectations of security quite drastically or move elsewhere. In the worst-case scenario, the impending global sea-level rise will erode their home into the sea.

Currently Singapore is a city of four million people but the floating bubble city of Singapore 2121 will only be able to serve as home for twenty thousand. Therefore this utopian Singapore of the future will be able to house only the nation's business and government elites.

So how could such a place be a utopia? Currently Singapore's elites have to spend a lot of time and effort to systematically keep in check the activities of workers' unions, immigrant NGOs, civil rights groups, and opposition parties (a process involving biased laws, ever-present police

activity, bogus lawsuits, and crackdowns on anti-government speech). The elites of Singapore just find the common worker moanings about the lack of social welfare and public healthcare in Singapore very annoying, as we might witness from the 2006 Wee Shu Min scandal, in which the daughter of an MP berated a member from the “sadder classes” before telling him to “get out of my uncaring elite face.”³⁰ A number of People’s Action Party politicians gave out half-hearted apologies, but many others stated she was just laying it down as it was and anybody from the underclasses who were offended just could not face the truth. In Singapore 2121 there will be no more pesky working class or middle class to require constant oppression, thus effecting an elitist utopia.

Singapore 2121 will have comfortably replaced the lower and middle classes with robots and computers that do not demand high wages or healthcare (or political reform) and so the business and government elites live in a luxurious paradise. Not only that, but everyone on the Malayan peninsula looks up enviously at Singapore floating high, making Singaporeans even more content.

Accra 2121

The capital of Ghana is increasingly exposed to fatal and costly urban floods every year.³¹ As the floods become more and more chaotic and more and more intense, the chronic economic pressure they cause (along with a public view that government action is inept) will likely increase. This will force, or encourage, the populace of Accra to migrate to less flood-prone zones.

Over time, as the floods become a regular event, only those families who build their houses above the flood line will avoid disaster. And so after one hundred years of this ongoing process, the whole population of Accra will have either migrated inland or they will have built their homes in the nearby forests. This second option becomes attractive for those low-income urban dwellers who realize that they can use the wealth and security of the forest to supply their own subsistence needs, especially if they band together to erect modular low-cost housing as a community endeavor (and then go on to learn to sustainably harvest the forest resources).

This new Accra will start off very simply; a few families moving into the surrounding forest during a flood and resurrecting their homes out



Fig. 5. Accra 2121. Illustration by author.

of harm's way. More join them and stay, realizing they can grow food and harvest building materials without needing to go into debt.

There are of course many examples of such alternative communities building up similar lifestyles in the twentieth and twenty-first centuries and these may serve as an inspiration for the Accra tree-town pioneers.³²

The use of trees as an environment for homes will likely keep more of the forest intact than might otherwise be the case, since those living there act to protect their trees from those that would clear them—the logging companies, mining companies, and oil companies, for instance. Currently these industries contribute to Ghana's current standing as the country with the third highest deforestation rate in the world.³³

The vision of Accra 2121 presented here will likely be looked down upon by the capitalists involved in the current African resource boom, but for those living in the slums and shantytowns of present-day Accra, the idea of being able to live in a safe treehouse with your family, and to secure an income from harvesting forest products and sharing them sustainably with one's neighbors, is positively utopian.

Since the people in the trees will soon be seen as protectors of the forest, and will also be engaged in reconstructing the nearby wetlands in the Accra delta, it is likely that international organizations, and later, the Ghanaian government too, will consider the treehouses worthy of further investment. And the time may come when these forest cities will be studied for possible emulation around other flood-prone areas of the tropical world.

Salvador 2121

When the land now called Brazil was explored in the early 1500s by Amerigo Vespucci, his literary renderings of the coastal indigenes flowed with descriptions of their society in utopian terms. While he was weary of the cannibalistic and libidinous natures of the native Americans, he spoke with admiration of their “stateless liberty,” “communitarian spirit,” and “freedom from overlords.”³⁴ These descriptions themselves are said to have had an influence on Thomas More’s original book.³⁵

Five hundred years later, Brazilian modernism set out to create a utopian capital city, Brasília, using grand avenues and wide open lawns (while provincial governments forged ahead with social housing projects aimed at giving poorer Brazilian families some living space within tower blocks in the outskirts of cities). Both examples of planning have been described as utopian by some but depressing and dehumanizing by others.³⁶

In the case of Salvador, the largest city of the province of Bahia, the land upon which the tower blocks have been built is likely to become unstable and unusable as it succumbs to global sea-level rise and increased water erosion. The architectural solution to this problem is to build floating platforms off the Bahia coast upon which are built individual city towers. The economic solution to encourage such architecture is to develop the rich aquacultural opportunities available in the waters surrounding Bahia. This part of the Brazilian coast has exceedingly rich fish biodiversity, and each tower community has some legal control over the use of living marine resources allotted to them by the Bahia government.

Each “sea-tower” can choose to operate either a self-sufficiency economy or a trading economy (the latter encourages a sea-tower community to trade with other sea-tower communities to gain a surplus or a



Fig. 6. Salvador 2121. Illustration by author.

profit, which is then reinvested back into the community). In either case each community is able to independently draw up their own guiding values. Some sea-tower communities are likely to choose such values as equity and equality, self-management, or a Christian lifestyle, while others primarily value a balanced work/life complex, eco-friendliness, cultural diversity, or sexual liberty. It is assumed that people like to reside within towers with other people who more or less reflect their own chosen values, but no tower authority is granted permission to expel those people who do not strictly adhere to these values. If they try to do so, there is still recourse to Brazilian law.

In any case the sustainability of each community is always of prime concern since the physical limits of the sea-towers discourages accumulation of physical assets; instead, any profit is reinvested into intangibles such as health care, education, and art—thus allowing the communities to develop utopian, if non-materialistic, lifestyles. The proximity of food production to food consumption helps the environment by reducing transport-related pollution, while the energy needed to power the sea-towers comes from renewable wave and tidal energy.

The initial capital cost of the sea-tower infrastructure is covered by the federal Brazilian government, but after the sea-towers are set up and occupied by residents for a few years, the financial cost of maintaining the infrastructure is covered by the community itself. No private mon-

ey is allowed to be invested or borrowed into the community, allowing the community members to live debt-free and without undue corporate influence. There is, however, a means test to insure that all aspiring residents are of a low-income background, and anybody who exceeds a certain limit (as agreed upon by the community) must forfeit excess income or move back to the mainland. This incentivizes the community to live in a sharing mode, discouraging poverty and encouraging a community atmosphere, and it also insures that each sea-tower will live within its physical limits.

New Amundsen 2121

The Peak Oil concept as it is written about nowadays may be but a distant memory by 2121.³⁷ By then, the oil and gas fields of the Arctic and Antarctic will have been opened up. This will be made commercially feasible due to the warming of these areas, and the subsequent melting of the ice sheets; making the development of oil and gas reserves financially rewarding.

Presently the Antarctic continent is protected by a two-kilometer-thick ice sheet and by the Antarctica Treaty (which forbids mineral and oil exploration).³⁸ By late this century, however, the ice sheets will have greatly subsided, opening up the Antarctic lands and seas to the possibility of resource exploration. And the Antarctic Treaty is liable to lapse in the 2050s as oil and gas companies promise to rescue the global automobile economy from near collapse.

And so presented here is a new town in Antarctica, New Amundsen, set up by a Norwegian gas company with initial capital investment from their government. The purpose of this town is to provide a homely and steady environment for the company workers and their nuclear families on a rocky bit of the continental shelf.

Some may see this as a dystopian vision for Antarctica's future, since it risks the onset of environmental degradation, wildlife extinction, and huge oil slicks or gas explosions in the Southern Ocean. Yet it is likely that those who live in New Amundsen will be well taken care of, with very high wages, great infrastructure, and schools and parks within walking distance to work and home; along with something of a reconstructed Norwegian community atmosphere. Here in New Amundsen, all families get a free home to live in (plus another back in Norway); and after work or school, they can all join in a singsong and schnapps in the park or square.

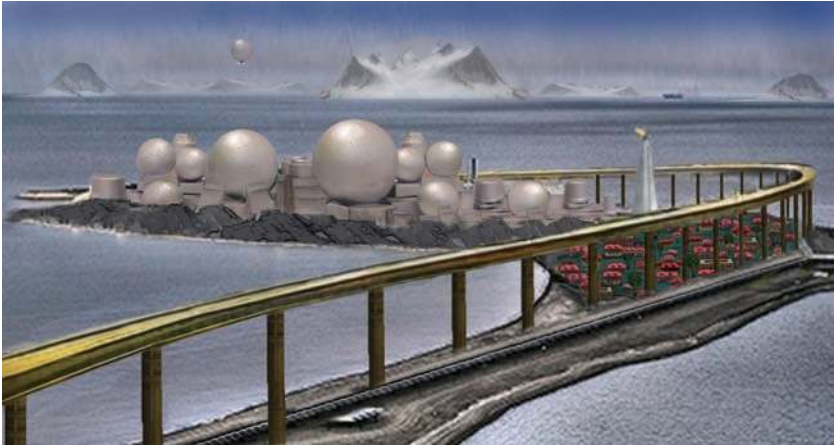


Fig. 7. New Amundsen 2121. Illustration by author.

Besides all that, the gas companies say—as they do today via PR campaigns—that they are not only complying with every single environmental law laid down by their nation but also that they are at the forefront of devising new and improved environmental technologies. In New Amundsen, for example, the need to build more gas pipelines that might crisscross Antarctica is now obviated by developing giant container balloons that fill up with natural gas and dispatch to float safely and serenely to markets around the world.

This is an easy-sell version of utopia, since Western liberal democracy and capitalism are allowed to flourish with no socioeconomic change. New Amundsen is an island of utopian liberal capitalism in an uncertain world of competing regimes of governance. And most everyone living there also believes that the new twenty-second-century Antarctica, with trees and gardens and running water, is far better than the old frozen one that nature bestowed.

Conclusions

So are these seven varying expressions of ecotopia meant to be earnest and serious or are they mere satire and speculation? Are they asking for us to identify a specific future for a specific city or are they just lampooning the policies and practices of today to warn us of where we are heading? Do they not confuse utopia with dystopia, and ecotopia with technotopia?

Are they suggesting some special important relationship between technology and the future? Or are they ambivalent and ambiguous about the supposed liberating effect of technology? Or maybe they are starkly negating the idea that environmental welfare can be improved via technology? Or do they, in the end, grudgingly admit that technology is going to win the way for those who manage to gain control of it?

Are these different designs perhaps suggesting that the concept of the city is doomed (or at least in need of radical adjustment) if they are to survive into the twenty-second century? Or are these seven varying versions of the future attempting to show the diversity of utopian imagination, and in the process, trying to undermine the idea that a single utopian world can hope to gain consensus?

The answer to all these questions is yes.

ABOUT THE AUTHOR

Alan Marshall is a New Zealand-born scholar working within the discipline of environmental studies. For his work in environmental scholarship, the University of Wollongong (Australia) awarded him a doctoral degree in 1999. Marshall has worked as a researcher and teacher in institutes and universities all around Europe and in the Asia-Pacific region—from Curtin University of Technology (Australia), through KUSTAR (Abu Dhabi), to the Institute of Advanced Studies in Science, Technology and Society (Austria). Currently he is a lecturer at Mahidol University (Thailand).

NOTES

1. For examples appearing in fictional form see J. Carrey, *The Faber Book of Utopias* (London: Faber, 2000). For examples appearing in nonfiction form, see H. P. Segal, *Utopias: A Brief History from Ancient Writings to Virtual Communities* (Malden MA: Wiley-Blackwell, 2012). For examples recorded in reality see R. Fishman, *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier* (New York: Basic Books, 1977).

2. For analysis of the variety of utopian writings across the ages, note works such as L. Mumford, *The Story of Utopias* (New York: Viking, 1964); R. Levitas, *The Concept of Utopia* (New York: Peter Lang, 1990), Carrey, *The Faber Book of Utopias*; F. Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (New York: Verso, 2005); C. Spannos, *Real Utopia: Participatory Society for the 21st Century* (Oakland CA: AK Press, 2008); D. Suvin, *Defined by a Hollow: Essays on Utopia, Science Fiction, and Political Epistemology* (New York: Peter Lang, 2010); G. Cleays, *Searching for Utopia: The History of an Idea* (New York: Thames and Hudson, 2011).

3. T. More, *Utopia* (Harmondsworth, UK: Penguin Books, 1982). For analysis of this

text, see the texts listed in note 4, as well as T. Marius, *Thomas More: A Biography* (Cambridge MA: Harvard University Press, 1999); and T. Halpin, "Utopianism and Education: The Legacy of Thomas More," *British Journal of Educational Studies* 49, no. 3 (September 2001): 299–315.

4. As explained in works like Levitas, *The Concept of Utopia*; Carrey, *The Faber Book of Utopias*; and Cleays, *Searching for Utopia*.

5. For detailed explanations of specific and generic ecotopian visions, see E. Callenbach, *Ecotopia* (Berkeley CA: Banyan Tree Books, 1975); M. DeGeus, *Ecological Utopias: Envisioning the Sustainable Society* (Utrecht, Netherlands: International Books, 1999); Levitas, *The Concept of Utopia*.

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