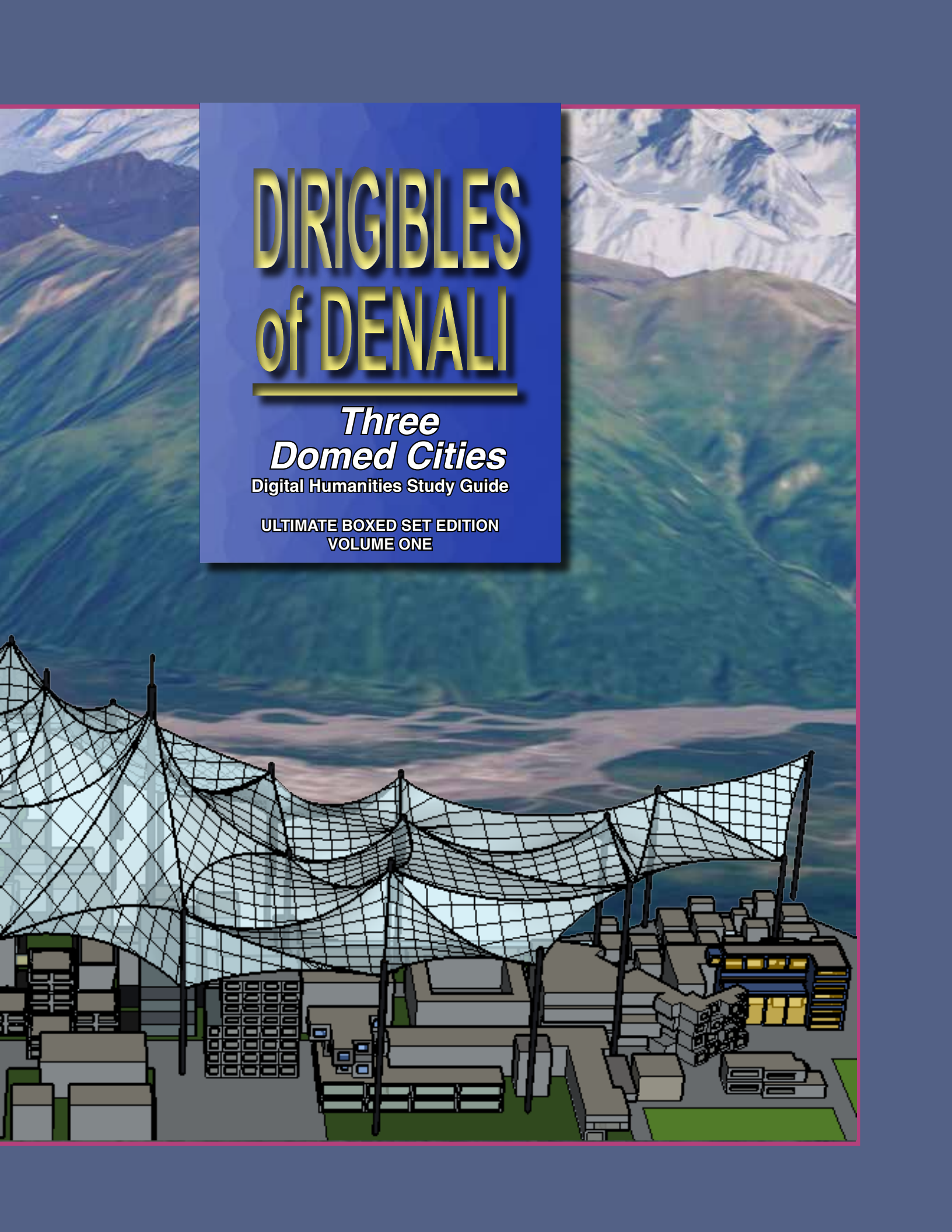


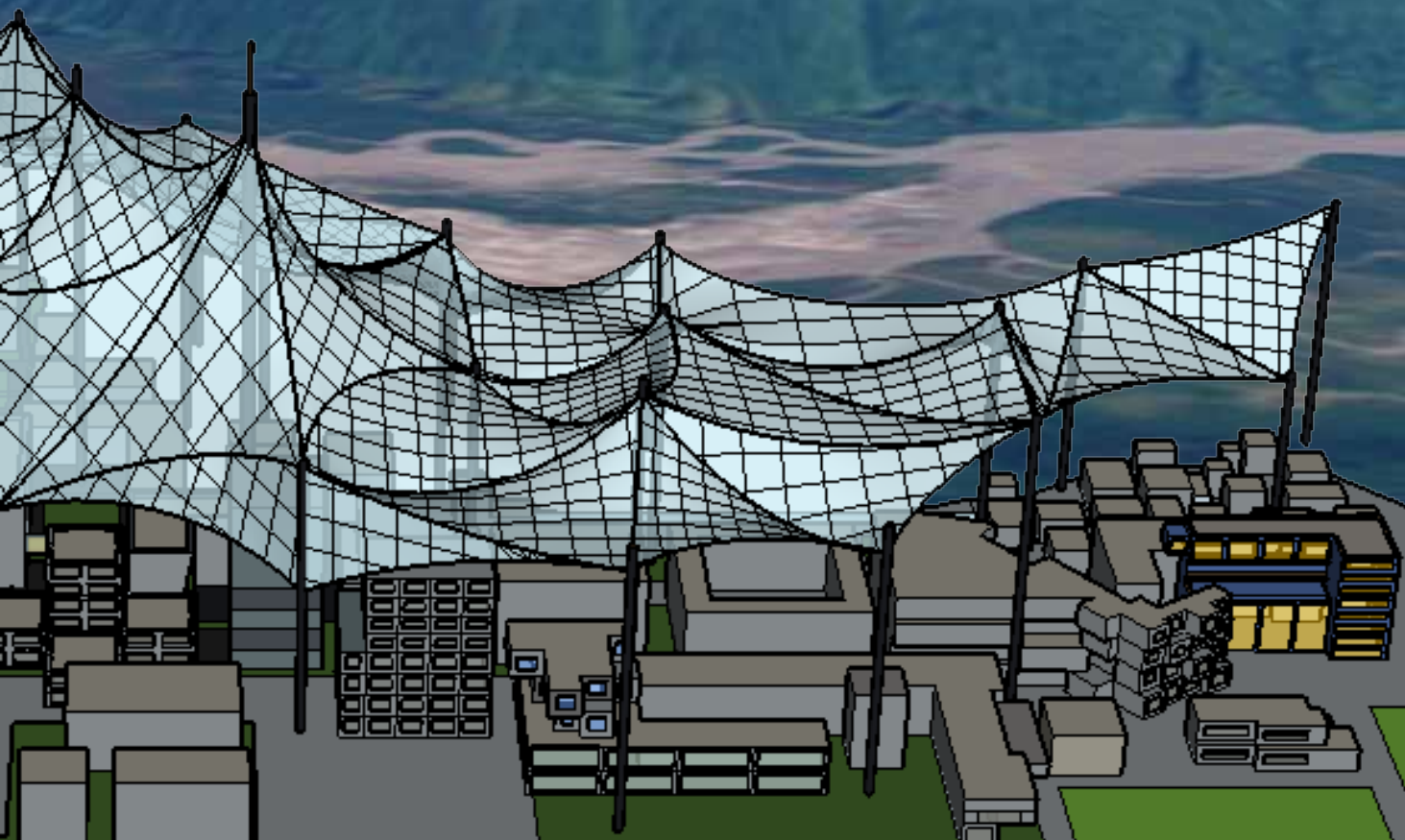


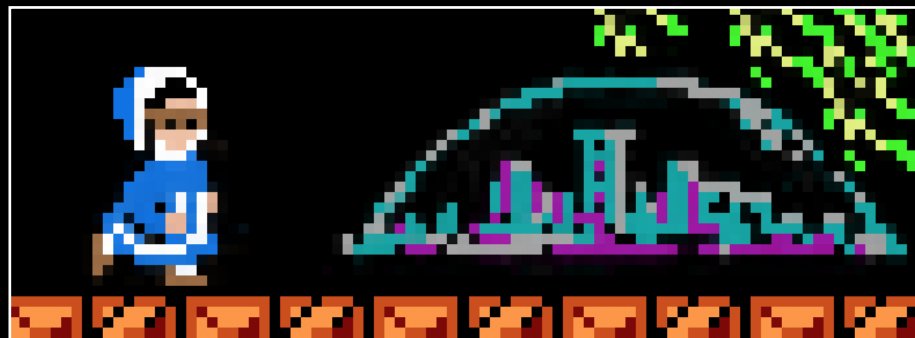
DIRIGIBLES of DENALI

Three Domed Cities

Digital Humanities Study Guide

ULTIMATE BOXED SET EDITION
VOLUME ONE

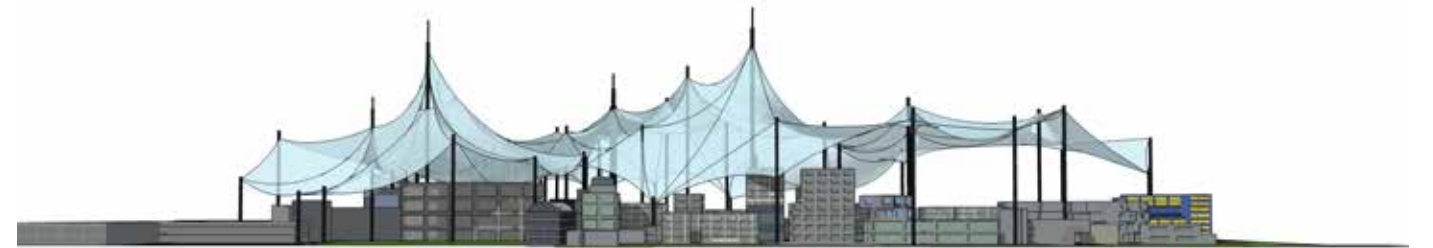




Top: "Aqpik and Mars Apple Flying Away from Denali City"

Middle: "Aqpik and Mars Apple, Dirigible Platz Rooftop, Denali City"

Bottom: "Cloudberry: Tomorrow Island, Yesterday Isle"



Dirigibles of Denali

Abridged Digital Humanities Study Guide

Nathan Shafer



Anchorage, Alaska, 2018

cover image: 'Denali City on the Tokositna' Nathan Shafer, 2017

SPRITE LEGEND



Digital Humanities

The image of a homunculus inside an alembic represents the general usage of the digital humanities. This can include history, critical theory and design.



Indigenous Cultures

The image of an ulu, or Arctic knife, represents Indigenous cultures, specifically the cultures of the Arctic.



Alternate History

The image of a piece of Sailor Boy Pilot Bread represents alternate history.



Augmented Reality

The image of a halibut hook represents things that are connected to augmented reality.



Reality Television

The image of a milk rabbit, or troll cat, represents reality television.



Virtual Realms

The image of a cloudberry represents things that are connected to digital and virtual worlds, this can be anything from videogames to the collective unconscious.



AUGMENTED REALITY

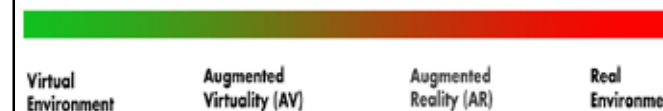
HOW TO USE THIS TEXT

Augmented Reality (AR) is a digital overlay of the real world. It is part of a spectrum of reality, which we refer to as **mixed reality (MR)**. On one side we have experienced reality, or the real environment, where nothing is digitally enhanced. On the other end of the spectrum is total **virtual reality (VR)**, a completely digital world. Somewhere in the middle is **augmented virtuality (AV)** and augmented reality, where this art project and book situates itself.

AR is accessed through a smart device that has the appropriate mobile augmented reality application uploaded. The augments in this text use a simple and free mobile app called **hp Reveal**. After you have loaded the app to your smart device, search for the 'DirigiblesofDenali' channel and follow it.

With hp Reveal opened on the 'scan screen' hold your device over images in this text to find augments.

MIXED REALITY (MR)



Source: Milgram, P., & Kishino, F. (1994). A Taxonomy of Mixed Reality Visual Displays. *IEICE Transactions of Information Systems*, 77(12).

Multimedia augments will appear over top of the images. Some of them are links to further readings, or digital uploads. To access links or uploads, tap on the augment that appears on your smart device's screen.

The polar cities this project is about can also be accessed as **geolocative layers** on another

mobile augmented reality app, **Layar**. Sometimes, mobile AR apps are called **browsers**.

The issue you will have as a viewer when using Layar, is that those geolayers are site-specific. That is, they have a very specific latitude, longitude and altitude. Viewers need to know those locations ahead of time, and then get there before they can launch the geolayers to see the cities in situ. All three cities have been placed on location, in the sites where originally proposed. This is hard for viewers outside of Alaska to access.

To view the cities wherever you are in the world in augmented reality, we have also designed a mobile app called "Dirigibles of Denali". This is a unique stand-alone app that is free to download, and will let the viewer walk through the cities in real time, wherever they are.

As a digital humanities text, this study guide functions as a resource to learn more about these cities in historical and literary contexts, so the augments in this text function as a way to bring extra information or detail to the original material.

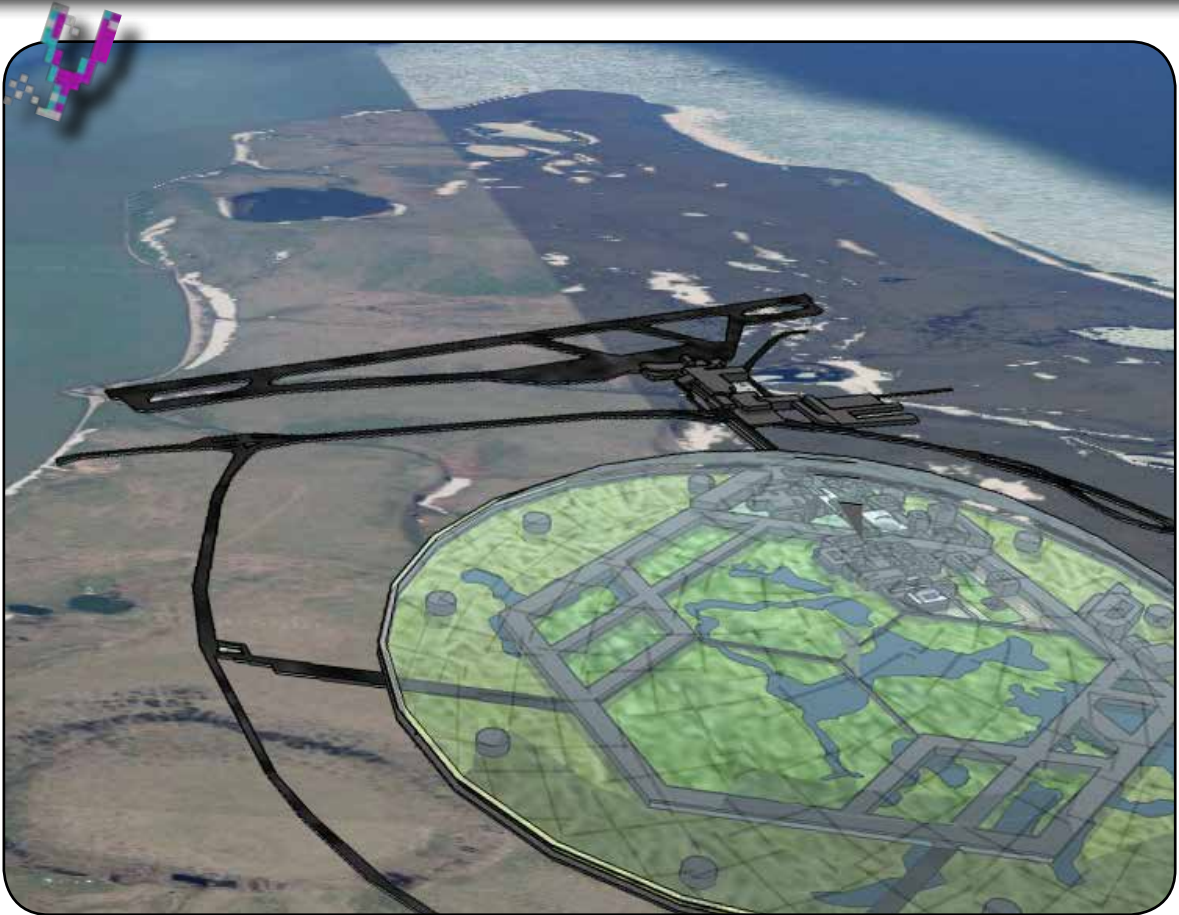
This project has a lot of different pieces and formats because we wanted to create many different ways of getting into the material. For a normal, unmediated experience, simply reading the text or looking at the images in the show is completely fine. They were designed to be consumed that way as well as in mixed reality. Using an AR browser simply increases your experience with them.

The 3D models of the cities have retained a touch of their architectural sketchiness, and do not have interiors. This is because the AR browsers we are using are not capable yet of creating that level of detail. We have employed Alaskan writers to tell stories set in these cities to bring life in these cities to you.

GETTING STARTED

The following image and QR codes launch augmented experiences.

SCAN in the HP REVEAL app



Nathan Shafer, Aerial View of Arctic City at Lockard Point, near Kotzebue, 2017

SCAN in the LAYAR app

These augments launch geolocative layers, so you need to be at their locations to see



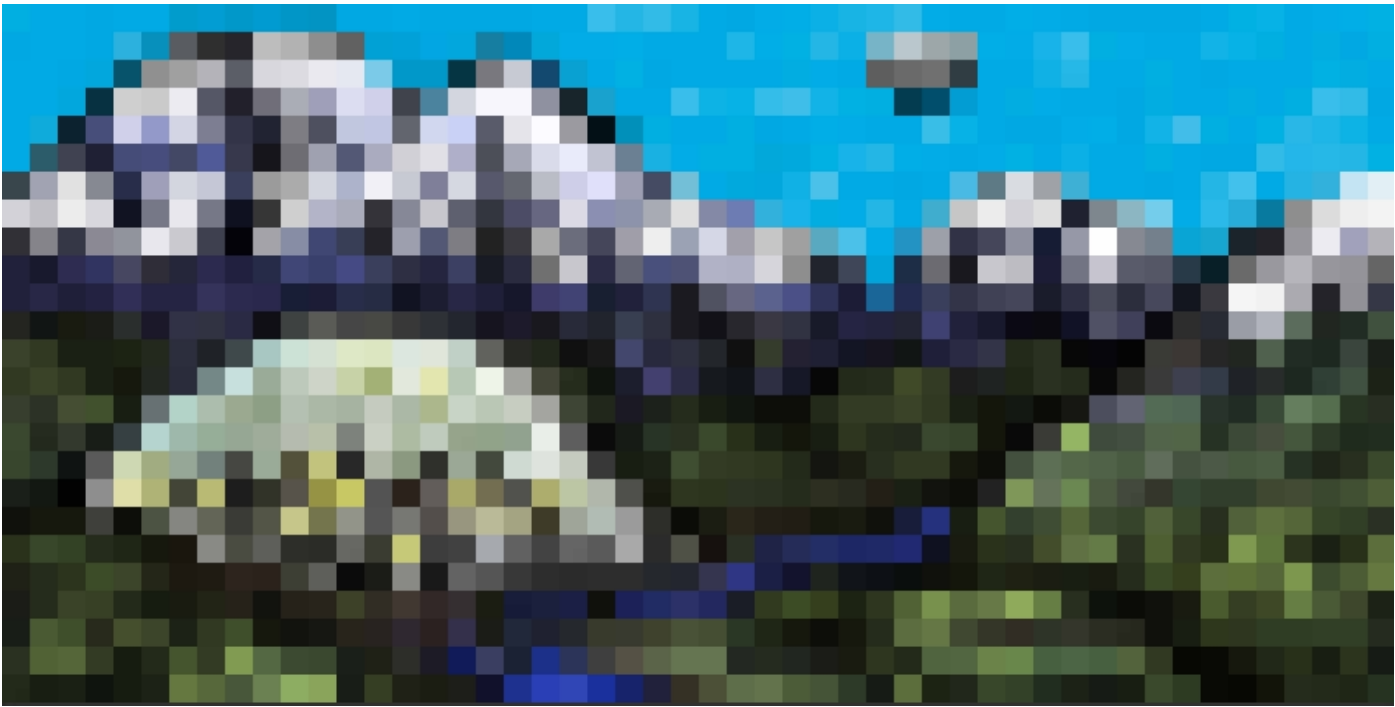
Arctic City
(1964-1970)



Seward's Success
(1968-72)



Denali City
(1972-80)



Nathan Shafer, Domed City, Dirigible, 2016

Introductory Signifiers and the Kingdom of Lovely

ONE of the issues with augmented reality is that it is hard to know what, of all the things in the real world, are actually augmented. Something being printed makes the likelihood of that image being a target for augmented reality slightly better. But it is still hard to tell. A printed image in an augmented reality study guide makes it a certainty!

There are no standard signifiers, or ways of knowing if an image is connected to the larger digital/virtual world. For the most part almost all images included here are either targets for augments or are pictures of augments out there in the real world!

On the opposite page are QR codes, which are a very primitive version of augmented reality, they launch the geolocative augments of the three polar cities this project covers. We know from experience that QR codes are meant to be scanned and that they will connect to something in the digital/virtual worlds. QR codes are an introductory signifier. A good first step to the large multiverse of augments.

An intermediary step would be something like the picture above, a pixelated image of a

dirigible approaching a domed city near Denali.

When we look at an image that is pixelated, we know from experience that it is a digital image. A good

example from the real world here is the coat of arms for a micronation known as the Kingdom of Lovely. Now this image is not an AR target, but it looks like it could be. Maybe it should be.

The Kingdom of Lovely was founded by Danny Wallace on a BBC mockumentary called "How to Start Your Own Country". The territory for the Kingdom of Lovely was mostly Wallace's apartment in London, but also included a large portion of the official kingdom online. The coat of arms is noteworthy because the imagery is pixelated, to represent how much of the kingdom is digital.

We have employed the use of pixelated sprites to assist viewers in accessing important points of interest within the text. Enjoy!



Coat of Arms to the Kingdom of Lovely.

--- **CLOSER THAN WE THINK!**

Southeast Alaska Empire
Juneau, Alaska
NOV 16 1977

POLAR CITY

As Alaska joins the union, more rapid development of the vast open spaces of that new state can be expected. Experts are already studying the problems involved in creating the population centers that will be necessary for tapping the hidden-wealth of the area and building the defense outposts that may be required.

One possibility would be to construct arctic cities under great domes of transparent plastic or glass, where springlike temperatures could be maintained. Such domes are already in use at the Glasgow Central Station in Scotland and at a big downtown plaza in Sao Paulo, Brazil.

How would isolated polar cities, ringed by icebergs and mountains, be supplied? Our armed forces have a solution - the dirigible. Recently, the Navy told how its blimp ZPG-2 successfully flew food and other supplies to an ice island team of scientists only 500 miles from the North Pole.

--Chicago Tribune, January 25, 1959



**Gravel Proposes
McKinley Bubble**

ANCHORAGE (AP) – Alaska Senator Mike Gravel says a recreational city built near Mt. McKinley under a glass dome could increase Alaska tourism and become “one of the physical wonders of the world”

The Democratic senator told the Anchorage Chamber of Commerce on Monday the city could offer a unique, controlled environment beneath a dome so high it wouldn’t be threatened by golf balls.

He said the dome could be built on state park land with state funds, while the city itself could be developed in private enterprise.

Gravel said if Congress plans to double the size of Mt. McKinley National Park, it should help make it available to the public. So he intends to include a \$100 million provision in his d-2 legislation for a transportation system that also would serve the new city. That system would include rapid transit for a 40-minute trip from Anchorage to the park.

Gravel said the city’s power could be provided by the Susitna Dam project, which

he predicts will be online by 1986. He visited the proposed new city site at the foot of the Tokositna Glacier on Tuesday with a representative of TAC, a Boston architectural firm; Mayor Stacey Stenley of Aspen, Colo.; Alaska mountain climber Ray Genet and others.

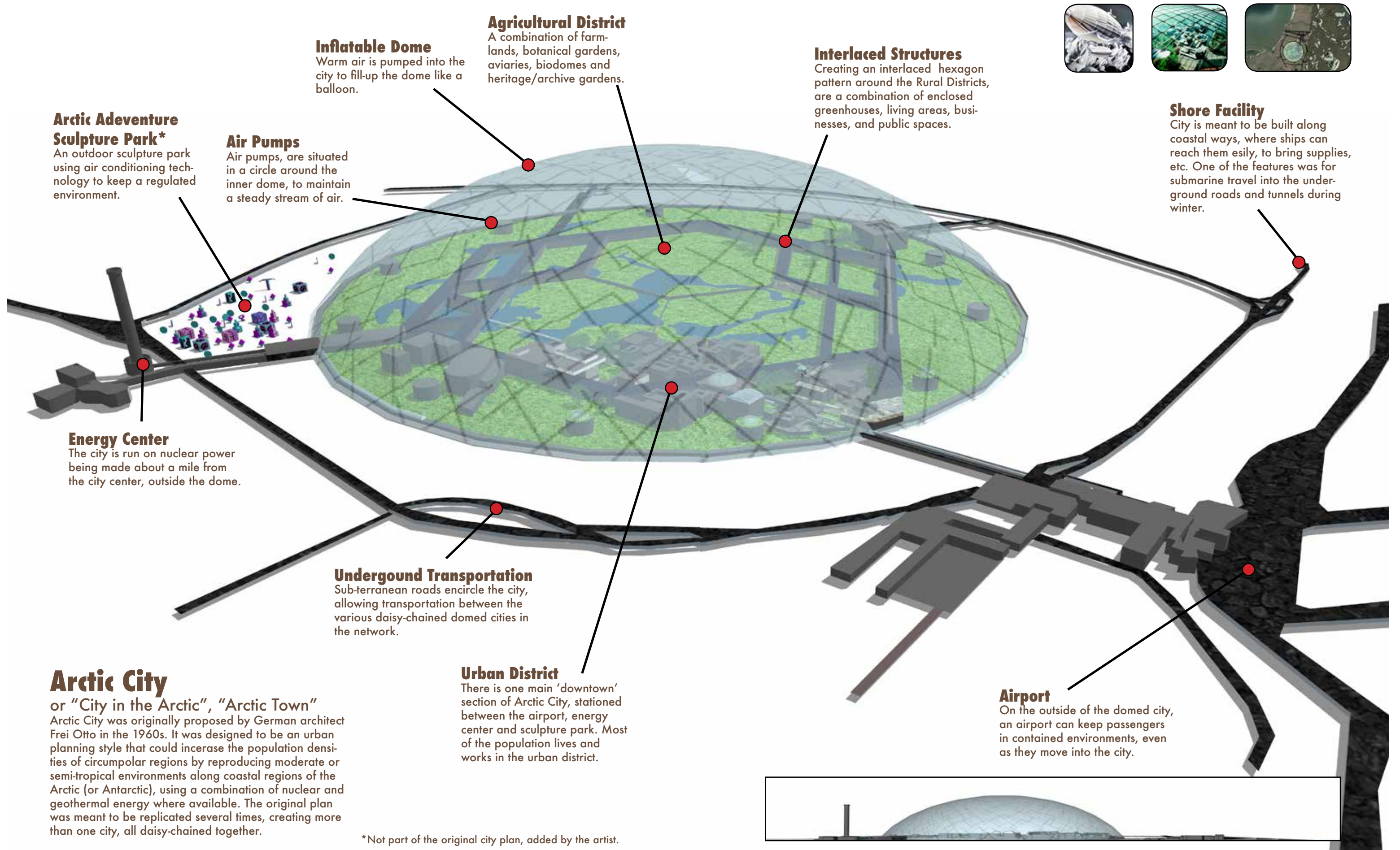
Gravel said he is opposed to Aspen-style development at McKinley because “Alaska is not Aspen or Sun Valley.”

He said the new city will “have to compete with everything in the world at once. We’ve got to come out with something spectacular. The technology is there to do it.”

The proposal “may sound far-fetched and visionary,” Gravel said, “but I think it will be of benefit to Alaska.”

He said the plan is not tied in with the proposed new state capital near Willow.

“I expect legislation at some point that will say not one federal sou shall be used for moving the capital,” he said. “It is viewed Outside as conspicuous consumption.”



Arctic Adeventure Sculpture Park*

An outdoor sculpture park using air conditioning technology to keep a regulated environment.

Air Pumps

Air pumps, are situated in a circle around the inner dome, to maintain a steady stream of air.

Inflatable Dome

Warm air is pumped into the city to fill-up the dome like a balloon.

Agricultural District

A combination of farm-lands, botanical gardens, aviaries, biodomes and heritage/archive gardens.

Interlaced Structures

Creating an interlaced hexagon pattern around the Rural Districts, are a combination of enclosed greenhouses, living areas, businesses, and public spaces.

Shore Facility

City is meant to be built along coastal ways, where ships can reach them esily, to bring supplies, etc. One of the features was for submarine travel into the underground roads and tunnels during winter.

Energy Center

The city is run on nuclear power being made about a mile from the city center, outside the dome.

Underground Transportation

Sub-terranean roads encircle the city, allowing transportation between the various daisy-chained domed cities in the network.

Urban District

There is one main 'downtown' section of Arctic City, stationed between the airport, energy center and sculpture park. Most of the population lives and works in the urban district.

Airport

On the outside of the domed city, an airport can keep passengers in contained environments, even as they move into the city.

Arctic City

or "City in the Arctic", "Arctic Town"

Arctic City was originally proposed by German architect Frei Otto in the 1960s. It was designed to be an urban planning style that could incerase the population densities of circumpolar regions by reproducing moderate or semi-tropical environments along coastal regions of the Arctic (or Antarctic), using a combination of nuclear and geothermal energy where available. The original plan was meant to be replicated several times, creating more than one city, all daisy-chained together.

*Not part of the original city plan, added by the artist.

Seward's Success

"The Twenty-First Century City"

Seward's Success was proposed by Tandy Industries of Oklahoma, to be petroleum center of Alaska, as the oil industry was beginning to boom in the state. It would have been a carless city, with moving sidewalks and enclosed walkways. An air tram from the city center to downtown Anchorage would have been a major feature of the city. It was put on "permanent hiatus" when the Trans-Alaska Pipeline initially failed to pass in Congress.

Alaska Petroleum Center

The most obvious feature was going to be a skyscraper, named after the industry that brought it into existence.

Commercial Mall

After the downtown area was built, the remaining areas of Seward's Success were to be built up in sections, which were all interconnected via enclosed walkways.

Future Expansions

After the 'First Phase', where the downtown area was built, the remaining areas of Seward's Success were to be built up in sections, which were all interconnected via enclosed walkways.

Schools

Elementary, Middle, High School.

Residential Units

State-of-the-art living quarters with all of the modern amenities, built specifically for families.

Enclosed Walkways with Moving Sidewalks

Between every building would be a series of enclosed walkways with moving sidewalks and escalators. Letting people walk the entire city without ever going outside.

Transportation System (Air Tram)

The main entrance into the city was via the air tram from downtown Anchorage.

Sports Arena

World-class sports arena to host professional athletic competitions.

Residential Mall

State-of-the-art living quarters with all of the modern amenities, built for singles and college students, in a mall structure.

Outdoor Recreation

Access to outside environment, in a controlled, safe setting: gardens, etc.

Schools

University of Alaska Anchorage (Seward's Success Campus).



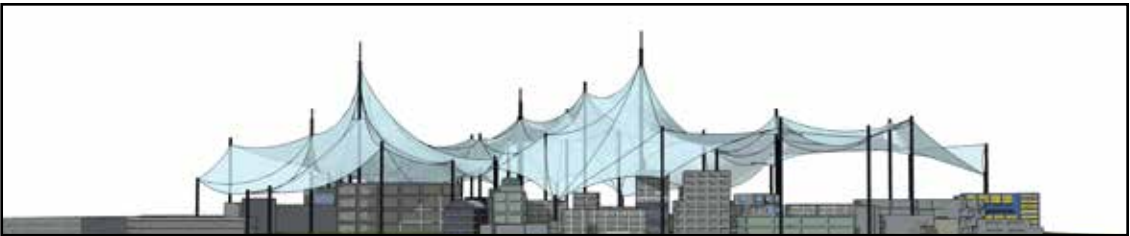
Denali City (lower site)

"A Leisure Town of the North"

Denali City was originally proposed by Alaska's Senator Mike Gravel to be a "leisure town of the North." Its design was meant to create a "winter wonderland" in Alaska that harnessed the power of the natural environment, rather than keep it out. The original plan called for two sections: the 'Lower Site', along the Tokositna River; and the 'Upper Site', built up into Peters Hills from the Tokositna River basin. The proposal was criticized as being the "Gravel Gambit" and was ultimately never realized.

Steel Poles

Built to support the weight of the Teflon drapery.



Institute of Human Understanding

Global think tank and creative embassy promoting understanding between all.

Dirigible Platz

"Dirigibles for Denali" program flies tourists into Denali City from the Talk-eetna Air Station.

Transportation Center

Mag-Lev train station, tourbus terminal, RV parking.

Teflon Drapes

Clear Teflon drapes cover the city, keeping snow from accumulating.

City Built Under Drapes

All buildings under the drapery can remain snow free, throughout winter.

Climate Regulators

State-of-the-art climate regulators are employed in large formats across the city, regulating temperature and humidity.

Controlled Environment

All microenvironments underneath the Teflon drapery are controlled environments.

Botanical Gardens

Clear Teflon domed gardens are found throughout the city, and just outside the drapery.

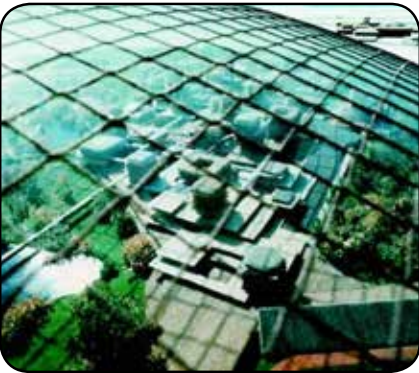


1 Three Domed Cities

Nathan Shafer

In the 1970s Alaska saw three proposals for ‘domed cities’ go unrealized: **Arctic City, Denali City and Seward’s Success**. They were referred to as ‘domed cities’ in the local papers and popular press, and they would be remembered as such in an Alaska that never quite was. Coincidentally, they weren’t really ‘domed’ cities. Well, Arctic City was—the other two require a bit more exposition—and Arctic City was not really meant for Alaska, specifically. The relationships between these three cities hasn’t been much discussed, but the fact that three forward-thinking northern cities were being proposed at all, even if only as speculations, points at a global trend in the **media ecology** of the 1960s and 70s towards an optimistic and pioneering arctic urbanism, which would be on the literal

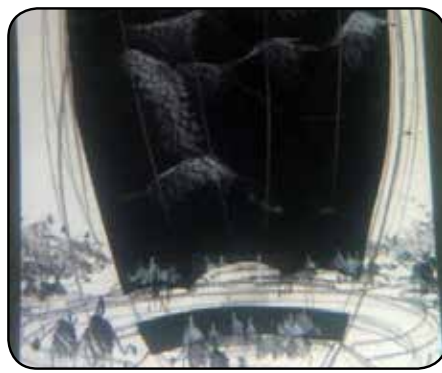
Alaska’s ‘Domed Cities’



Arctic City
(1964-1970)



Seward’s Success
(1968-72)



Denali City
(1972-80)

frontier of space colonization. In Alaska, it was spurred on by a political philosophy of endless resources, and globally by an accelerating consciousness towards the future of evolving humanity. These proposals were optimistic to be sure, but their unique transitional flavors illustrate a hesitance in the human experience to forego metropolitan babbling and speak a holo-phrastic urban utterance all their own.

Of the three, only one was designed to be an actual ‘domed’ city—in the sense of a city literally enclosed by a dome: Arctic City, also known as Arctic Town or City in the Arctic. I prefer the name Arctic City because it sounds like one of the fic-



Fig. 1

tional cities in the DC Universe, and I wish to discuss these cities in relationship to comic books and science fiction in the popular imagination. Arctic City was proposed as an inflatable, nuclear powered dome envisioned by the German architect **Frei Otto** in collaboration with Ewald Bubner, Kenzō Tange and a few others. The proposed dome material was a double lattice of steel and polymers, with polyester fibers nestled in between them, meant to survive and be responsive to the harsh arctic conditions, while maintaining a comfortable, normal European climate on the inside of the dome, with a metropolitan center, suburbs, a waterway and farmable land. From the looks of it—it was a completely speculative city, designed for nowhere in particular in the Arctic, and was probably never meant to be literally built, but rather be a development style used to overcome the perceived problems of living in the Arctic (or the Antarctic, as he had previously sketched an almost identical idea for a domed city for the Antarctic archipelago in 1953). Or they both might just be artistic musings. Inspiration. Sort of like a phase one for colonial interplanetary architecture, but starting small and with suburbs. Climate-controlled buildings and towns are part of Otto’s architectural style and one of his main contributions to contemporary urban design. Otto watercolored a moderately whimsical sketch of a ‘City in the Arctic’ in 1964 (Fig. 1) and over the next decade he would occasionally add sketches to this musing, and by 1970, his atelier along with a band of collaborators to design the

VOCABULARY

media ecology
the study of media as environments
(Neil Postman, 1970)

Fig. 2



Fig. 1: Frei Otto, City in the Arctic;
Fig. 2: Frei Otto with model of Arctic City



Fig. 3

Fig. 3: Ralph Erskine, Resolute Bay; **Fig. 4:** New Town I at Frobisher Bay; **Fig. 5:** Antarcto, from Magnus Robot Fighter; **Fig. 6:** Lex Luthor's Dirigible Homebase, Action Comics #23, 1940

buildings, translated it into a full proposal with a handsome 3D architectural model. (Fig. 2)

There have been many proposals for domed cities in the frozen parts of the world, and many more if we factor in speculative fiction (which I do). In 1958, a Canadian proposal appeared for a futuristic city stacked in a circular pattern around a domed structure called New Town I at Frobisher Bay, in Iqaluit, Nunavut, what was then called the Northwest Territories. (Fig. 4) By the early 70s, there was a wave of Canadian proposals of futuristic cities patterned on the innovative 'frontier' spirit of Arctic City and New Town I, the most notable one being a horseshoe shaped city in Resolute Bay (Fig. 3) proposed in 1973 by Ralph Erskine; who later composed an entire portfolio of cold-weather urban developments including his own domed city proposals in Antarctica. Erskine was a British national who worked out of Sweden, and gained recognition with his designs for a mining town north of the Arctic Circle called Svappavaara, that used stack buildings as a windbreak.

The original plans for New Towns I (and II) at Frobisher Bay—as well as Seward's Success, predate Arctic City's formal proposal in 1970. The fact that Arctic City never specified an exact location in its proposal, makes it a pan-arctic city, for anywhere in the circumpolar north, equally at home with the Alaskan biomes as it is with the Canadian, Greenlandic, Siberian or Scandinavian ones, and it connects them with the global design trends in polar urban planning of the day.

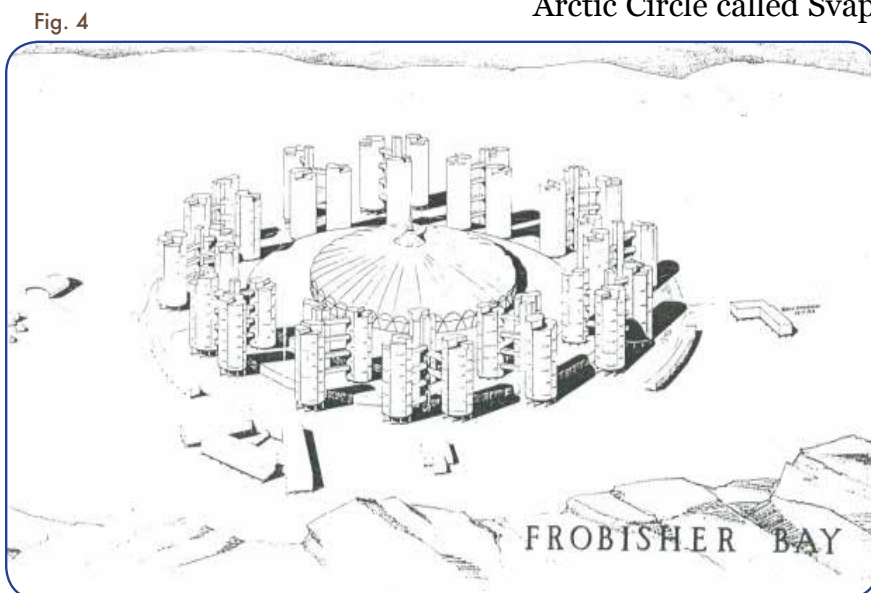


Fig. 4

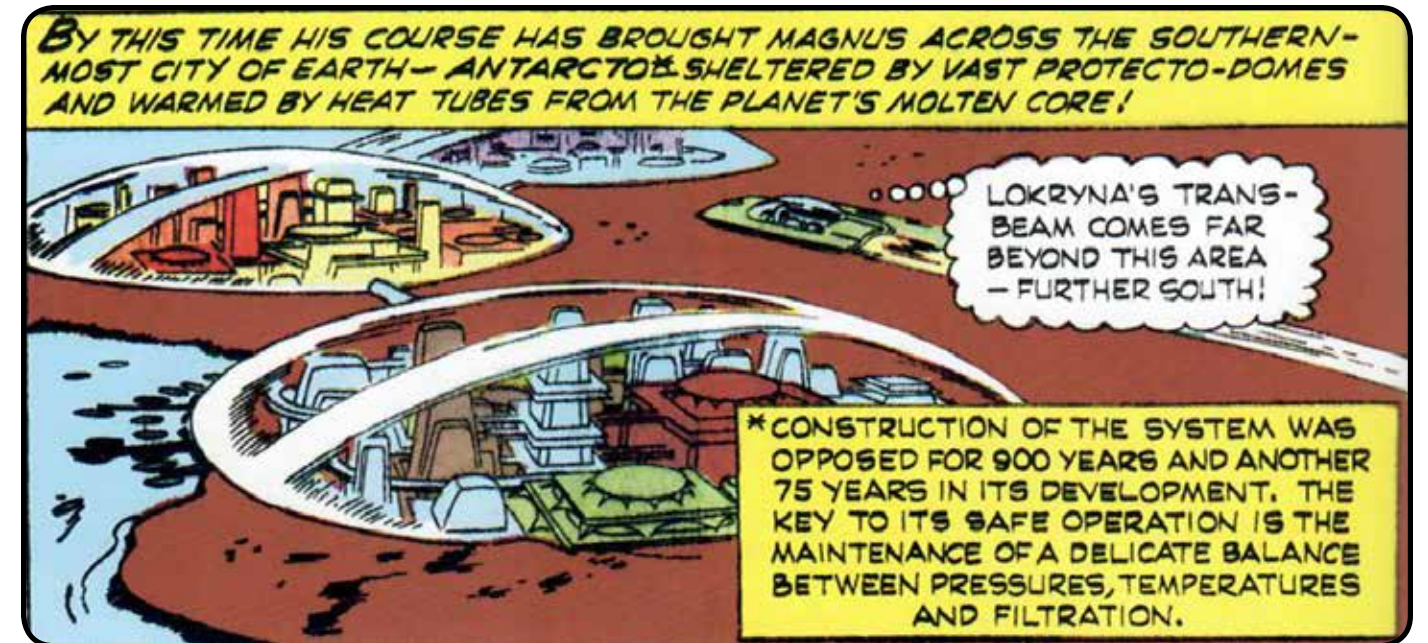


Fig. 5

Many of the resulting architectural proposals from this line of thinking have influenced other unrealized bubble dome or climate-controlled urban proposals all over the world, including Antarctica, the Himalayan Mountains, the Middle East and more recently in Polynesia, as a direct response to climate change, with the Floating City project designed by the Sea-steadying Institute. In a comic book entitled *Magnus, Robot Fighter 4000 AD*, a domed city in Antarctica was conceived and depicted in 1963, called Antarcto. (Fig. 5) Before Antarcto, DC comic's supervillain Lex Luthor, had a secret home base that was a climate-controlled city suspended by a gargantuan dirigible in the stratosphere, found in Action Comics #23, from 1940. (Fig. 6)

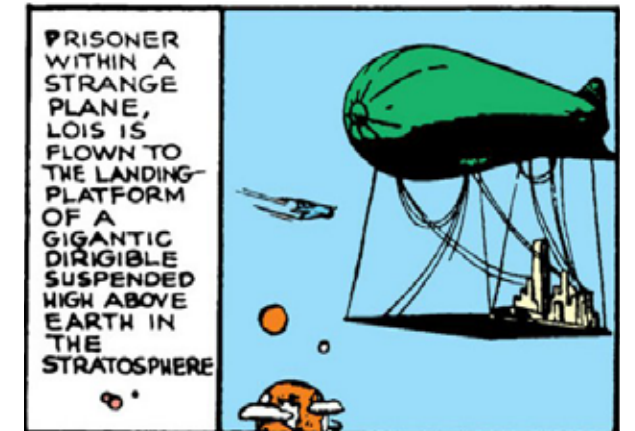


Fig. 6



DOMED CITIES

1. What are the main differences between a 'domed city' and a 'controlled environment'?
2. Of the three 'domed cities' proposed in Alaska, which one was actually a domed city?

SIMILAR DESIGNS

Notice the similarity between the proposal for Arctic City and Antarcto. Later versions of Arctic City show that it could be duplicated and multiple domed cities could be daisy-chained together, exactly the way Antarcto is.

VOCABULARY

megaproject

a very large, expensive, or ambitious business project

umiak

an open Inuit* boat made of a wooden frame covered with hide

arcology

a concept in which the ideal city is a massive vertical structure, which preserves more of the natural environment, a concept combining architecture and ecology as envisioned by Paolo Soleri

hygge

a quality of cosiness and comfortable conviviality that engenders a feeling of contentment or well-being (regarded as a defining characteristic of Danish culture)

* Merriam-Webster Dictionary still uses the term "Eskimo", we have changed it, as Eskimo is considered a derogatory term for Inuit people. The singular is also 'Inuk', 'Inuit' is plural, not 'Inuits'.

An Informal Movement of Megaprojects

What started with Frei Otto as a watercolor notion became the basis for an informal movement of **megaprojects** in the circumpolar north (and south), due in no small part to Frei's reputation as an architect of exemplary vision who in 1972 designed a series of Teflon drape structures used to cover sections of the Munich Winter Games, where the 'City in the Arctic' model was on display. (Fig. 9) There is a tendency to view parts of the northern landscape as a frozen space devoid of life and culture by those living outside of the region. One of the main criticisms leveled against the Canadian proposals for 'domed' cities is that they took for granted the deep connection the Dene and Inuit have with the land the megaprojects were proposed for. And it is true, there are parts of the circumpolar north that do not have trees, or an easily distinguishable horizon line, they can be quite foreign and otherworldly, some parts are cold almost the entire year, people and culture can appear sparse—sometimes it feels like the prison from *THX-1138*, or an empty white videogame start screen before anything happens, precreation realms, white infinities, etc. But there is life in the great cold expanses, organisms, people who have lived there for thousands of years, who tell some of the most amazing stories on Earth. On the coastal regions, without trees, they collected driftwood and bones and built **umiaks** to hunt some of the largest and longest-lived animals on the planet.

Life in the circumpolar north is spread out over vast distances, and the population densities before mainland Europeans arrived had a different critical mass than found elsewhere, and still do, almost throughout. There is still a lot of wilderness. There were not cities, in a traditional European sense, so the idea of transplanting one seems healthy and at-

tractive to the rest of the world, especially in the sub-arctic regions where urban sprawl took off during the mid-twentieth century. The idea of a domed city in the circumpolar north is more of a speculation about how to daisy-chain grid-based cities, rather than address the reality of life in the north through urban planning. And domes keep the wilderness out, which is probably why the two other 'domed cities' being discussed here are not domed cities in their proposals at all. It is hard to imagine an urban area in Alaska without ravens, so to speak. The cohabitation with the wilderness has long been a northern tradition in the villages and cities, acutely illustrated in Anchorage's 'Big Wild Life' campaign from the mid-oughts. (Fig. 8)

Denali City and Seward's Success were ways of curating heat, not conquering the perceived flaws of nature, the way Arctic City was. That being said, a domed city in the arctic is not exactly a purely colonial enterprise, especially if one considers the global media ecology we live in today. It can function as a way of augmenting the natural resources of a place, without completely rejecting the centuries of culture that have defined it, a method more commonly referred to as **arcology**, being a combination of architecture and ecology, with low-impact to the natural environment and a more responsive approach to design. There are arcological greenhouses in village hubs (Bethel, Nome, Kotzebue, Utqiagvik, etc.) supplementing people living subsistence lifestyles, and have had positive impacts on the environmental, physical and mental health of people living in the Arctic. With global warming devastating the natural environment there, greenhouses also function as seed banks of northern vegetation such as wildberries and tundra herbs. As one of its main literary tenets, the science fiction trope of domed cities are a human tool used to combat dramatic climate change, and they may be used still in real life, as global warming continues to decimate northern biomes. This push towards arcology can be seen in the plans for both Denali City and Seward's Success.

POINTS OF INTEREST



Frei Otto

Born: Frei Otto
1925
Siegmar, Germany

Died: 2015
Warmbronn, Germany

Nationality: German

Occupation: Architect
Structural Engineer,
Urban Planner

Fig. 7a

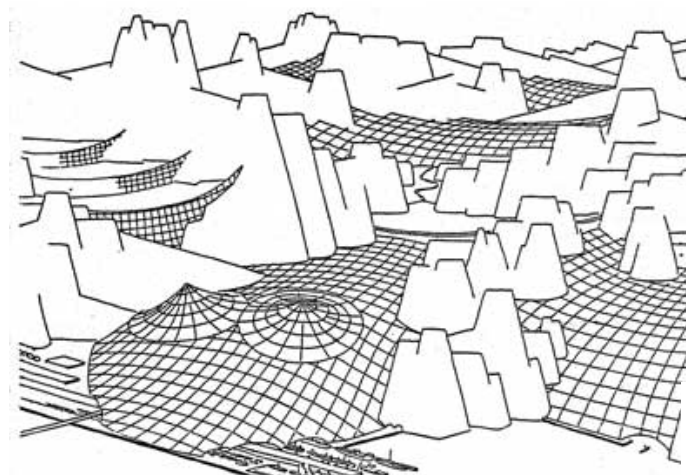


Fig. 7b

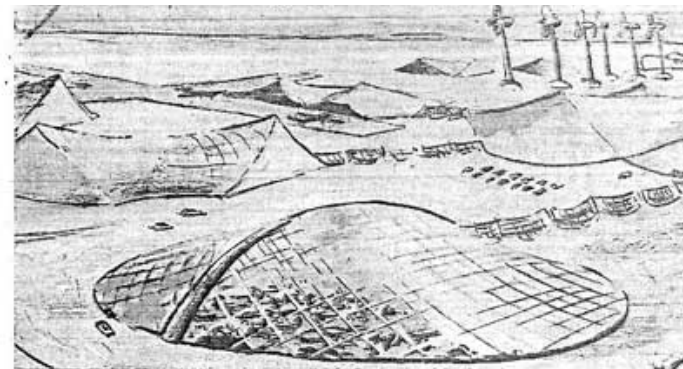
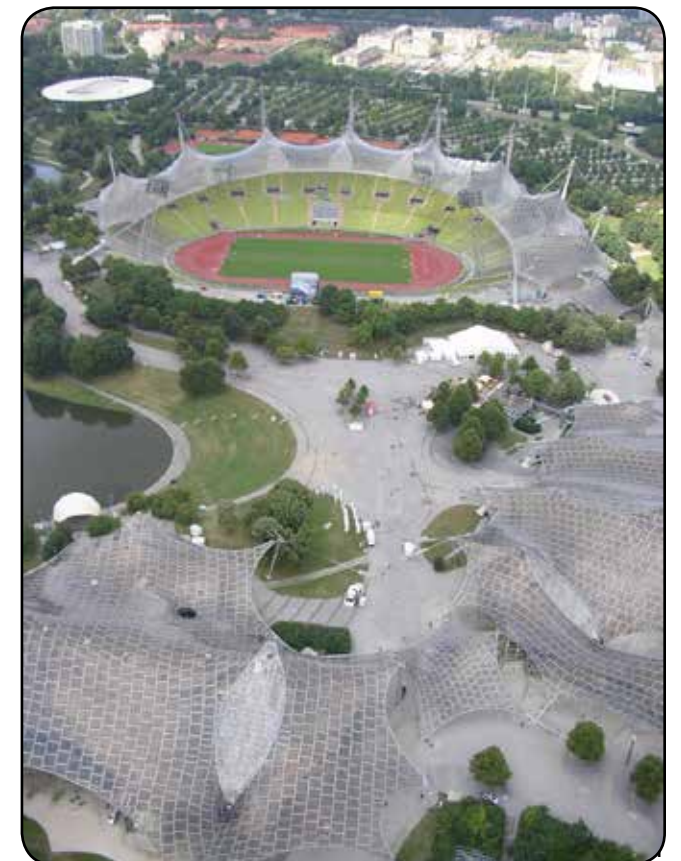


Fig. 7a & 7b: Frei Otto, Architectural Projects for Arctic Regions; **Fig. 8:** Advertisement for 'Big Wild Life'; **Fig. 9:** Frei Otto, Summer Olympics Pavilion

Fig. 8

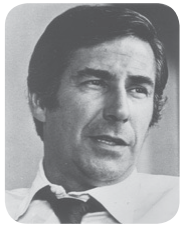


Fig. 9



POINTS OF INTEREST

A Leisure Town of the North



Sen. Mike Gravel

Born: Maurice Gravel
1930
Nationality: American
Occupation: United States Senator
for the State of Alaska
In Office: 1969-1981
Party: Democrat

Arctic City is the most unknown of the three proposals to Alaskans, but probably the most well known to those outside of it, especially in Canada and Europe. It is also the project that inspired the core philosophy of Denali City. In fact, it was images of Otto’s Teflon drape structures that Denali City’s initiator, **Alaskan Senator Mike Gravel**, used to discuss the feasibility of his “leisure town of the north”. Denali City is another purely speculative city, one designed by Alaskans, with Alaska’s interests in mind, composed with formidable body knowledge of the environment. Denali City was an extended study made to bring tourism revenue and create a completely new experience in the north by building a winter wonderland in the foothills of North America’s largest mountain, Denali (Deenaalee, in the original Koyukon Athabascan), located on the banks of the Tokositna River, a site inspired by Sydney Laurence’s famous painting of Denali from the Tokositna in 1919. Imagine a series of covered areas strategically placed in the form of a city, creating controllable microclimates that take the sting of -20 out of the air, all while leaving snow on the ground for people to frolic in. It was supposed to make winter recreations more comfortable for tourists, dazzle them with scenery of the Alaskan wilderness with its integrated architecture and provide an Alaskan version of the Scandinavian **hygge**.

Unfortunately, there are no real press package images for Denali City, the images used were sketches and photographs of models of Arctic City and a scattering of other previous designs by Frei Otto and Buckminster Fuller, as a point

of reference, or proof of concept. Apart from a couple of very basic stick figure ink sketches (Fig.s 43+44), Denali City does not have the unique series of artistic renderings or interpretations that make megaproject proposals so sexy to citizens and investors. It remains a series of conversations and studies, and all cards on the table, as a conceptual artist and science fiction author, I am more drawn to Denali City than I am to the other two Alaskan proposals simply because it is more mysterious and undefined, in that basic visual sense. Over the last ten years I have been keenly interested in works of art that exist only in descriptions, especially those found in science fiction novels (Fig. 11.), so Denali City’s existence without imagery, or even a set of urban schematics makes it a very attractive enterprise to me artistically. It is also not guilty of misunderstanding the Alaskan landscape, which makes it all the more disappointing that it didn’t gain more traction. In fact, I believe there are some genuinely amazing ideas in the proposal. The title of this book comes from one them. “Dirigibles for Denali” proposed a series of space age dirigibles to shuttle tourists to Denali City, and is the basis for one of our collaborative alternative histories in this book. They would have launched from Talkeetna, a small town a couple hours north of Anchorage, that until recently had a cat for a mayor, by the name of Stubbs. The people of Talkeetna did not want a dirigible tourist airport in their town. Like many Alaskan towns, they preferred less direct access and the right to remain autonomously bizarre.

The plan for Denali City coincided with another Alaskan city which was never realized, a new capital city for Alaska in the northern section of the Matanuska-Susitna Borough, near Willow, though Senator Gravel said that Anchorage should have simply been remade into the state’s capital, and kept the plans for Denali City from being integrated with the capital city move initiated during his tenure as senator. Either way, had Denali City been realized, it would have transformed the very nature of Alaska, from its economy to the circadian and seasonal rhythms, as more people would have made Alaska home. Even with its small population, Alaska has defined itself by those who have settled in various locations and transformed the natural environment to better suit their needs. In other words, Denali City is city plan that can still be realized, as a later chapter will illustrate exactly how and why Denali City was sidelined.

Fig. 10: Nathan Shafer, “Li Dnay Crossing the Tokositna” inspired by the Sydney Laurence painting; Fig. 11: Nathan Shafer, Novel Pieces, 2007; Fig. 12: Mt. McKinley Scenic View, a Spoof of Denali City Proposal

Fig. 11



Most of the images the public saw of Denali City were spoofs like the one below.

Fig. 12

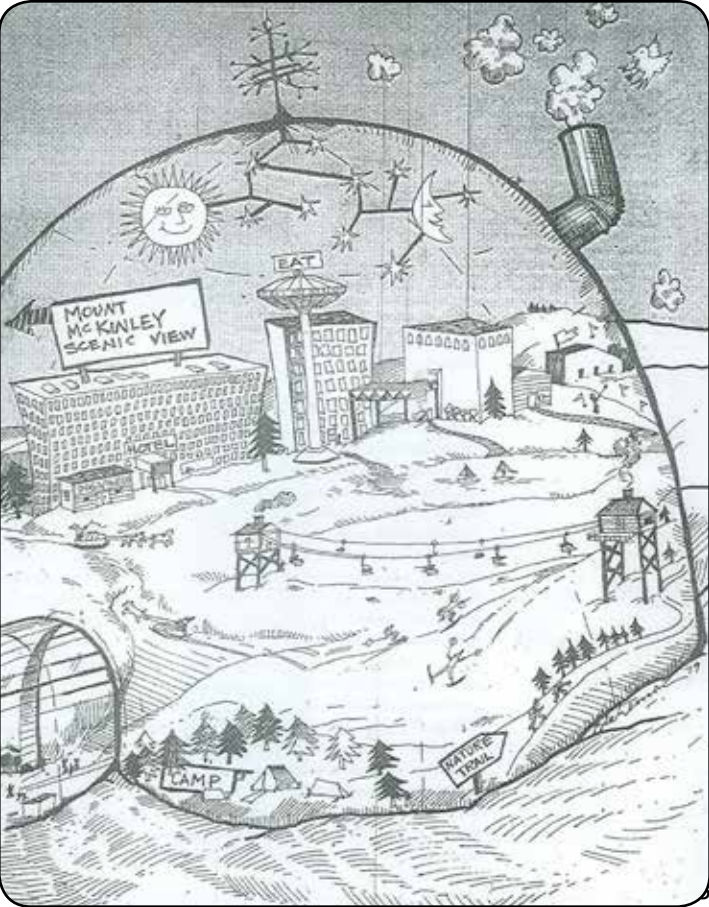
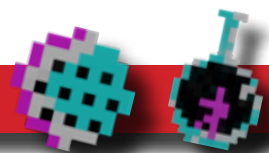


Fig. 10





Proof of concept images used for Denali City, as Gravel imagined it, were taken from Frei Otto's architectural proposals. Images such as this Teflon-covered city above. They were meant to be domes that could host mining communities that were extracted fossil fuels from the local area.



DENALI CITY

1. What was the reason Denali City was proposed?
2. What are the main differences between Denali City and Seward's Success and Arctic City?
3. Would Denali City still be a good idea?
4. Has rapid climate change already changed the reason Denali City was to be built?

A CITY MADE OF WORDS

The Situationist International proposed the ideas of "psycho geography", 'hypertext' and 'unitary urbanism' as critiques of status quo urbanism and mass consumerism.

Denali City can be said to be a 'psycho geographic' city.

What do you think?



TUQASHITNU (TOKOSITNA)

"Stream of Things That Fall into Water"

Denali City was proposed to be located on the banks of the Tokositna River. This is an area inside of the Matanuska-Susitna Borough, far to the north end (Seward's Success was planned for the far south end at MacKenzie Point). The Matanuska-Susitna Borough is located inside ancestral Dena'ina lands. The Tokositna River is called the **Tuqashitnu** in Dena'ina. It means "Stream of Things that Fall into Water." The mouth of the river is called **Tuqashi Kaq'**, "Mouth of Things that Fall into Water River." The rapids (that Sydney Laurence made the famous painting of (Fig. 10), are called **Ch'etl'uch'ghi-lyasht**, "Where We Hold Things (Boats) in Water." There is also a stretch of the river, near Ruth Glacier (**Dghelay Ka'a Li'a**, "Big Mountain Glacier") called **Tuqashi Tayena**, "Straight Stretch of Things That Fall Into Water." This river is named after the Tokasha Mountains just above it, **Tuqashi**, "Things [Rocks] That Fall into Water."

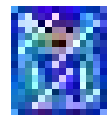
All of these bodies of water stem from the Tokositna Glacier, **Tuqashitnu Li'a**, "Glacier of Things That Fall into Water River."

From *Shem Pete's Alaska*, "Shem Pete: That glacier extends upriver from **Tuqashi**. That's a big one. Big glacier."

*This is the site of a story recorded by Shem Pete about a woman who was captured by the **Li Dnay**, the "Glacier People". (Pete, page 163)*

(All information on Dena'ina placenames comes from *Shem Pete's Alaska*.)

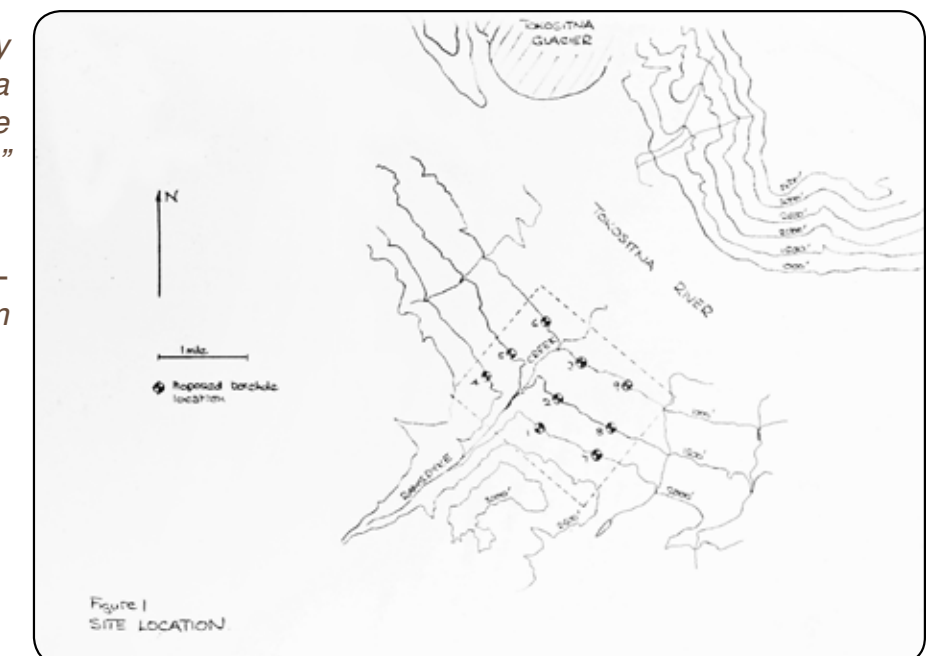
POINTS OF INTEREST



Li Dnay (Glacier People)

The **Li Dnay** are a supernatural race of people from Dena'ina stories who live in the glaciers of Alaska. Shem Pete recorded only one story involving them that was set at **Tuqashitnu Li'a**.

Lower Site Location for Denali City



excerpt from *SHEM PETE'S ALASKA*

(This is a series of quotes from people connected to the source material in the book, edited together by James Kari, I am including them here as points of reference and to provide more than one viewpoint on the subject at hand.)

Annabel 1997e:338: “Things I wonder about. How come we’re told that ‘Denali’ is the Injun name for Mt. McKinley? Every Injun I know in the area calls the mountain ‘Delaykah,’ which means simply, ‘That big peak over there.’”

The late Jennie Peters of Cantwell quipped to Kari in 1978: “We don’t call it ‘Denali.’ That what white people tell us we call it.”

Sheldon (1908:271-272, 277): “The Susitna Indians place the origin of man near Mt. McKinley and the raven as creator... The big peak marks the beginning of the world; here man first began existence, and from here the spread to the utmost reaches of the earth... The mountain god is regarded as a producer, helping the Indian in his troubles. If the Indian ventures into the high mountains and appeals to the spirit, he is supposed to be received cordially and is given direct advice for his future conduct.”

Browne (1956:4): “If you can earn the confidence of the aged Indians they will tell you of days when the earth was covered with water, and how a god who was chasing his eloping sweetheart threw a rock with intent to kill, and how that rock rose above the falling water and stands to this day--the incomparable Doleika.”

Metcalf (1910:256): “To the Russians it was known as ‘Bolshoy,’ to the natives of Cook Inlet as ‘Traleika,’ both signifying high or ‘big’ mountain. The Indians have a strange myth concerning it, believing it to be the birthplace of mankind; the Creator has His workshop near its base, and there, even to this day, is busy fashioning with His hands the human race. While thus engaged He assumes the form of a raven. The great peak thus marks the beginning of the world, when mankind has migrated to the utmost reaches of the earth.”

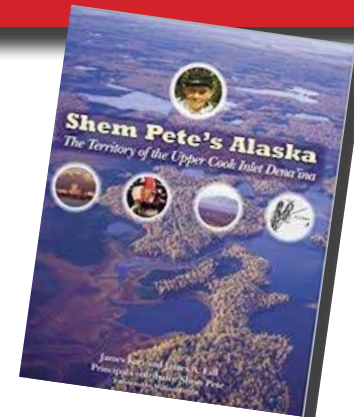
The late John Stump remarked that the clouds on top of **Dghelay Ka’a** are said to be the smoke of the fires of **dghelay dnay**, the legendary ‘mountain people.’ John Stump: “Same thing that big McKinley mountain, they’re people too. All the Indians say when they [the mountain people] build a fire you see their smoke--those clouds on top. All Indians will say ‘We’ll be glad they built a fire. Gonna warm up.’ And it did too. And when it’s all clear up there, no smoke on the mountains, they’re gonna get cold. And they do too. They’re people, three of them. They used to be people. When they see cloud, they say, ‘By God, they’re waking up. They’re building a fire.’”

These clouds in the mountains that are said to control the weather are called **yuq’ qite-ni** ‘the ones that hold the [other] clouds.’ (Kari, Pete, page 163)



MORE THAN A NAME

1. Denali is North America’s tallest mountain at 20,310 ft.
2. In 1896 it’s name was changed to Mt. McKinley in honor of William McKinley who was running for US President at the time. In 1917, the US Government made Mt. McKinley the official name of the peak and it stayed that way until 2015.
3. **Denali** does not mean “the great one” in any language. The Koyukon Athabascan people call it **Deenaalee** and it means “the tall one”. The Koyukon people also have an origin story for the mountain, which can be accessed by following the augment of the mountain above.
4. From the proposed site for Denali City, the mountain would be seen from the shores of the Tokositna River, a river fed from the Tokositna Glacier.



5. The Tokositna Glacier and River are on the **Dena’ina Elnena** (Dena’ina homeland), and the Dena’ina people call the mountain, **Dghelay Ka’a**, meaning “Big Mountain”, paired with the slightly smaller peak, right next to it, **Dghelish-la**, meaning “Little Mountain” (Mt. Susitna).

6. Denali is the third most prominent peak in the world as well as the 3rd most isolated. It is also part of the Alaska Range (**Dghelay Teh**, in Dena’ina), “Among the Mountains.”



BE'U
MT. FORAKER

BEGGUYA
MT. HUNTER

DGHELAY KA'A
DENALI

DGHELAY TEH
ALASKA RANGE

KAGHELTNU
KAHILTNA RIVER

TUQASHITNU ŁI'A
TOKOSITNA GLACIER

TUQASHI
TOKASHA MOUNTAINS

DENALI CITY
PROPOSED LOWER SITE LOCATION



TUQASHITNU
TOKOSITNA RIVER

K'ENUQAK'ITNETANT
PETERS HILLS

DENALI CITY
PROPOSED UPPER SITE LOCATION

“An Entire City Under Glass”

POINTS OF INTEREST



Shem Pete

Born: K'etech'ayutilen
1896
Susitna Station, AK

Baptised: Delindin Delendii

Died: 1989

Nationality: American,
Dena'ina Athabascan

Member: Nulchina clan of the
Susitnuht'ana band
(Upper Inlet Dena'ina)

Occupation: Storyteller, Historian,
Elder

Previous page:
Fig. 13: Nathan Shafer, Denali City

Opposite page, above:
Fig. 14: Nathan Shafer, Seward's Success from
Downtown Anchorage, 2016; **Fig. 15:** The Alaskan
Petroleum Center, from Seward's Success,
geolocate augmented reality, Point MacKenzie,
Alaska, 2013

Opposite page, below:
Fig. 16: “An Entire City Under Glass”, profile
and spread from Popular Science, 1970, on
Seward's Success

Seward's Success is the poster child for domed cities in the circumpolar north, even though it too was never proposed as a domed city. Due to the amount of positive press it garnered and the attractiveness of its artistic visualizations of what might have been, Seward's Success is, to this day, still regarded as one of most visible cities on Earth to have never been built and the most famous of the Arctic's unrealized metropolises. It is a most fully prepared city of the three this book looks at, in that its purpose, function and culture was created before the project was eventually put on permanent hiatus in 1972, oddly enough because delays building the Alaska Pipeline had been stymied. It was Denali City's initiator, Senator Gravel, who was able to get the construction of the Alaska Pipeline passed through Congress in 1974, through a bit of bipartisan political maneuvering. But even with the pipeline guaranteed, Seward's Success was never put back into serious discussion for beginning initial construction.

Seward's Success was planned to be located in an area two miles northeast of Anchorage's Government Hill neighborhood, across the Knik Arm, in a part of the Matanuska-Susitna Borough named Point MacKenzie, what the Dena'ina Athabascans named **Dihli Tunch'del'usht Bey-degh**, meaning the “Point Where We Transport Hooligans”. Dena'ina storyteller **Shem Pete** claimed that the distance between the shorelines was so small at one point that hooligan fisherman used to be able to share fishing tools across it. “But then it happened that it got wider. It might have eroded about a mile. But before, the banks were close together and they used to toss the ulu back and forth. I heard that from those old people.” (Pete, 273)

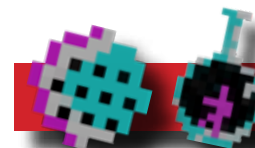
In this place where the candlefish run, Seward's Success was going to be a carless city, with interconnecting escalators, moving sidewalks and an air tram from Anchorage to downtown Seward's Success (this is one of Alaska's first ‘bridges to nowhere’) (Fig. 27). Interestingly enough, the original proposal for Arctic City described it as a carless city with moving sidewalks, interconnecting escalators and air gondolas, making it hard to say if one proposal was looking at the other, or if it was just in the air of the day that cities of the future should be a pedestrian smorgasbord of interconnecting escalators, moving sidewalks and air gondolas. The original city plan defined the first section of Seward's Success to be built, the downtown business and commerce area, a series of interconnected buildings located around a skyscraper called the Alaskan Petroleum Center. Phase One of Seward's Success was basically a huge shopping mall with a city built aside

a series of transportation tubes and enclosed greenways. It was of course supposed to have been paid for with the new oil money, flooding the state with revenue.

I used this same city plan to build the first augmented reality version of it back in 2013. (Fig. 14) Seward's Success was a city that truly incorporated the science fiction fantasies of the day in its design, and it was these Spaceship Earth tropes that ultimately lead to its misinterpretation as a ‘city under glass’ by Popular Science in their expose on the city published in 1970 entitled “An Entire City Under Glass”. (Davis, 74)



Fig. 16



SEWARD'S SUCCESS

1. Was Seward's Success proposed to be a domed city?
2. What were going to be the main features of Seward's Success that set it apart from other cities?
3. How would Seward's Success have changed Alaska, especially the Anchorage Area, if it had been built?
4. What are some other carless cities you can think of?

“A CITY UNDER GLASS”

Seward's Success was never meant to be under a glass dome. Instead it was imagined as a city that was completely indoors, with all of the buildings interconnected through a series of walkways.

Articles such as Fig. 16 are responsible for the misrepresentations of the city proposal.

Fig. 14



Fig. 15





Television Goggles

Pictured here is the science fiction writer, editor and publisher, Hugo Gernsback, of whom the Hugo Prize in Science Fiction is named, wearing his television goggles, an invention predating the standard usage of television, let alone mobile media or mixed reality.

Along with Jules Verne and HG Wells, Gernsback is considered one of the fathers of science fiction. He saw the main purpose of science fiction to be technological prophecy, and indeed he predicted many things in his writings before they were invented, including radar in his infamous novel, *Ralph 124C 41+*. Gernsback's writings are the basis for William Gibson's short story "The Gernsback Continuum".

Retrofuturism

Taking the proposals for these cities all together, it is tempting to view them with a retro-futuristic aesthetic, and indeed the painted artist's conceptions of Seward's Success have a certain Tales that Astonish meets EPCOT style. They would have worked well as illustrations in pulp magazines of the day telling stories about the future. As fate would have it, we are living in the exact time periods some of those futuristic stories were set in, but they don't reflect each other. Arthur C. Clarke's *2001: A Space Odyssey* for example, predicted the normalization of human interplanetary exploration, rather than the teleconnected computerized spacecraft we use today, sending robots in our stead. Towards the end of William Gibson's novel *Neuromancer*, one of the main characters, Case, is being antagonized by malevolent AI named Wintermute, who dials all of the public pay phones he walks by on a city street. The infamous samizdat in David Foster Wallace's *Infinite Jest* was a set of videocassettes, secretly passed around by folks. These combinations of obsolete technologies (or methodologies) in a futuristic landscape, being read by people from that future time period has the nostalgia of foregone anticipation, where we imagine both the time the stories were written in and our knowledge of what the future actually holds in the same hand. Science fiction is full of these examples and retro-futurism provides a very fertile viewpoint from which to create alternate history and speculative fictions based on them. The notion of a city under glass is exciting, and will remain that way as long as megaprojects of this nature never get the chance to obsolesce the way so many realized megaprojects and ultimately all technology does. Predicting the future is a tough business, and is best done under the helm of literature, where it can exist as an alternate history of both time periods without the conflicts of reality. This is precisely why Alaska's 'domed' cities can be mislabeled as historical oddities or flights of fancy. They are not simple footnotes—they are some of our collective dreams that got lost. In "The Gernsback Continuum", Gibson referred to these sci-fi notions that escape the velocity of the stories they are described in and become misprisions and fantasies in the popular imagination as **semiotic ghosts**, "bits of deep cultural imagery that have split off and taken on a life of their own". (Gibson, 29)

This book examines reality on those terms, embracing a good dose of obsolescence, creative misprision and loss. We are using a technology that is guaranteed to become obsolete in augmented reality. Augmented reality deals exhaustively in the world of semiotic ghosts. It is also limited by the technology we are using—the 3D models we would like to present here do not function well in mobile AR browsers. We are lim-

ited to a certain number of polygons for the augments to render properly and display on a mobile screen, they don't exist the way regular three-dimensional reality does. They are not yet the fully articulate holograms found in science fiction movies, where one can examine every inch of a digital reality exactly the way it should be. These augments are the contemporary ancient ancestors of that future technology. Obviously, some version of mixed reality, including virtual reality, will endure. The modes however, will change, get faster and eventually integrate seamlessly into everyday life. Mobile AR browsers are not new, nor are they particularly suited for the archive, in a few years the images will look dated, just like the images of the cities we are recreating. They are temporal solutions. There are no universal browsers or emulators to keep old AR projects on multiple platforms alive yet. They go pretty quick, and are normally contingent on third party software that does not have a long life expectancy. But that is okay. Think of it as a fleeting moment. A love story you get for a few hours. A moment in time where you can use a smart phone to augment the reading of an illustrated history book. There will be pictures to prove it happened. We even threw in a couple monster stories and discuss the timeliness of space ninjas in dystopian fiction to whet the appetite.

POINTS OF INTEREST



William Gibson

Born: William Ford Gibson
1948
Conway, SC
Nationality: American, Canadian
Occupation: Novelist
Genre: Science Fiction
Movement: Cyberpunk



SEMIOTIC GHOSTS

1. Explain what "bits of deep cultural imagery that have split off and taken on a life of their own," means to you.
2. What are some examples of 'semiotic ghosts'?
3. Why do you think William Gibson chose Hugo Gernsback as inspiration for his short story?
4. **Extra Credit** What is 'semiotics'?

"THE GERNSBACK CONTINUUM", (Part 1)

This short story by William Gibson was published in his book *Burning Chrome*, and is considered to be the birth of cyberpunk fiction. The narrator of this story is writing a book entitled, *The Airstream Futuropolis: The Tomorrow at Never Was*, about architecture from the 1930s, when he is besat by semiotic ghosts.

VOCABULARY

semiotic ghosts

bits of deep cultural imagery that have split off and taken on a life of their own

transhumanism

a philosophy that explores human transcendence above or beyond organic, corporeal limitations through technological and philosophical evolution

cyberpunk

science fiction featuring extensive human interaction with supercomputers and a punk ambiance

mobilias

mobile transhuman replacements for cities

telespheres

virtual nodes connecting the world to itself

panspermia

the scientific theory that all life on Earth came to it via a meteorite containing DNA, thus making all life on Earth extraterrestrial in origin

processed realities

mediated ontologies experienced by users of technology, measuring evolving brain power

extropy

the pseudoscientific principle that life will expand indefinitely and in an orderly, progressive way throughout the entire universe by the means of human intelligence and technology

Transhumanism and Cyberpunk

At the time of the designing of all three of Alaska's 'domed' cities, there was a philosophical movement growing out of the futurist writings of people like Buckminster Fuller, **FM-2030** and **Timothy Leary**: transhumanism. This philosophy can trace its roots back to at least the 1920s, in two scientific papers making predictions about the future: *Daedalus, or Science and the Future* by J.B.S. Haldane, 1923, and *The World, the Flesh and the Devil, An Enquiry into the Future of the Three Enemies of the Rational Soul* by J.D. Bernal, 1929. We still refer to this late-mid-century philosophical movement as **transhumanism**, and towards the end of their lives, Leary and 2030 referred to it as transhumanism as well, though Leary did so in a more roundabout way, preferring the terms **cyberpunk**, or Psi-Phy (the psychology of science). Initially, the self-help tone of transhumanism, seen in publications like Leary's *Neurologic* or 2030's *Are You a Transhuman?* may seem to be unconnected to the 'domed' cities we are looking at, but apart from transhumanism's heavily libertarian views of the natural environment and extinction, it is a vital and coherent way of understanding why 'domed' cities in Alaska had so much interest and also why they were eventually left undone. FM-2030 wrote of **mobilias** (pop-up physical communities that would replace cities) and **telespheres** (virtual, teleconnected oases around the globe and beyond that function to shorten the distance between people). Leary wrote and spoke of technologies based on an expanded evolution of human consciousness as well as in his mantra of S.M.I.I.L.E., which stands for space migration, increased intelligence and life extension; comparable to FM-2030's life long philosophy of "Optimism—Abundance—Universalism—Immortality". (Esfandiary, 129)

Transhumanism was deeply informed by science fiction, and continues to be so in its current iterations. When Timothy Leary was in Folsom Prison, he penned some early examples of transhumanist literature, including *Starseed*, a treatise on neurology, comets and the then semi-defined scientific theory of **panspermia** (life on Earth came from elsewhere via a meteorite). A sympathetic guard snuck Leary books like *Gravity's Rainbow*, taken at random from the prison library, along with the pen and paper he wrote those essays with, all while encouraging him to publish his thoughts before the 'square world' got to them first. At this moment, science fiction became a vehicle of telekinetic travel for Leary, a way to gain mental trajectory out of reality, processing it into a new awareness, not unlike the instances of astral projection found in the early cyberpunk novel *White Light*, by Rudy Rucker. For Leary, these '**processed realities**' measure

the daily brainpower of the average human in their mediated environment. We are using an updated and augmented version of Leary's visualization for processed realities to illustrate our work here, from his 1995 publication, *Chaos and Cyberculture*. (Fig. 18) Later in life, Leary spoke often of his favorite novel, where he drew the bulk of his inspiration for 'processed realities', *Neuromancer**. In it there is a humongous sprawl with several domed cities in various states of disrepair stretching from modern day Boston down to Atlanta, in the aptly named BAMA (Boston-Atlanta Metropolitan Axis). FM-2030's views of modern cities reflect this notion of cities being vestigial forms of human habitation, and one of his propositions was to archive entire cities as museum artifacts to be preserved by posthumans. "Our cities are too old to tear down too old to live in. They are now only valuable as museums. Museums are interesting to visit but not to live in." (Esfandiary, 100) At its core, transhumanism is a utopian philosophy designed to help humans understand themselves as they evolve into posthumans. An example of this is the notion of **extropy**.

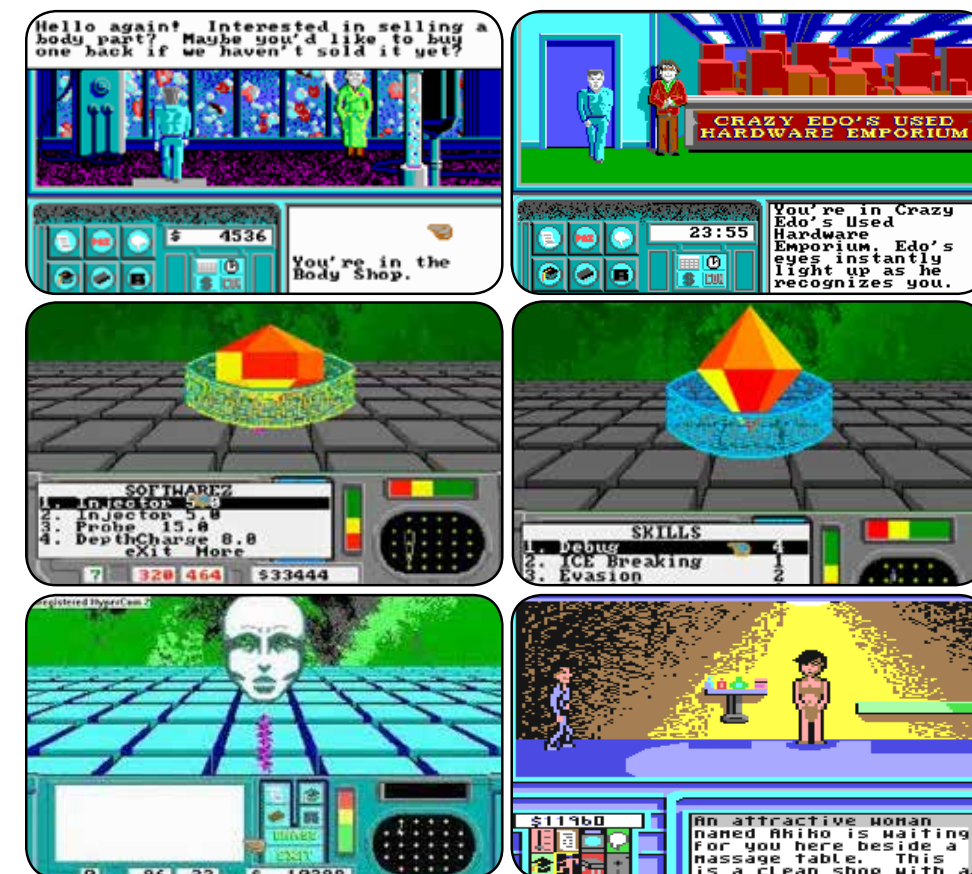
POINTS OF INTEREST



Proto-Transhumanists

JBS Haldane and **JD Bernal** were two scientists from the early 20th century who pioneered the philosophy of transhumanism, each writing scientific papers about the future. Both of these scientists were deeply committed humanists and influenced science fiction as we know it today.

EXTRA: NEUROMANCER VIDEOGAME

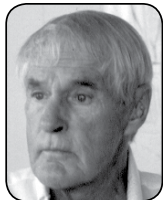


* In 1988 Timothy Leary helped develop a videogame version of *Neuromancer* with Interplay Entertainment, that was notable for its visualizations of 'cyberspace' and Chiba City. Fig. a-f: Screenshots from *Neuromancer*, 1988

POINTS OF INTEREST



FM-2030
Born: Fereidoun Esfandiary
1930
Brussels, Belgium
Died: 2000
New York, NY
Nationality: Iranian-American
Occupation: Writer, Philosopher,
Teacher, Consultant
Science Fiction,
Futurology
Genre:
Subject: Transhumanism



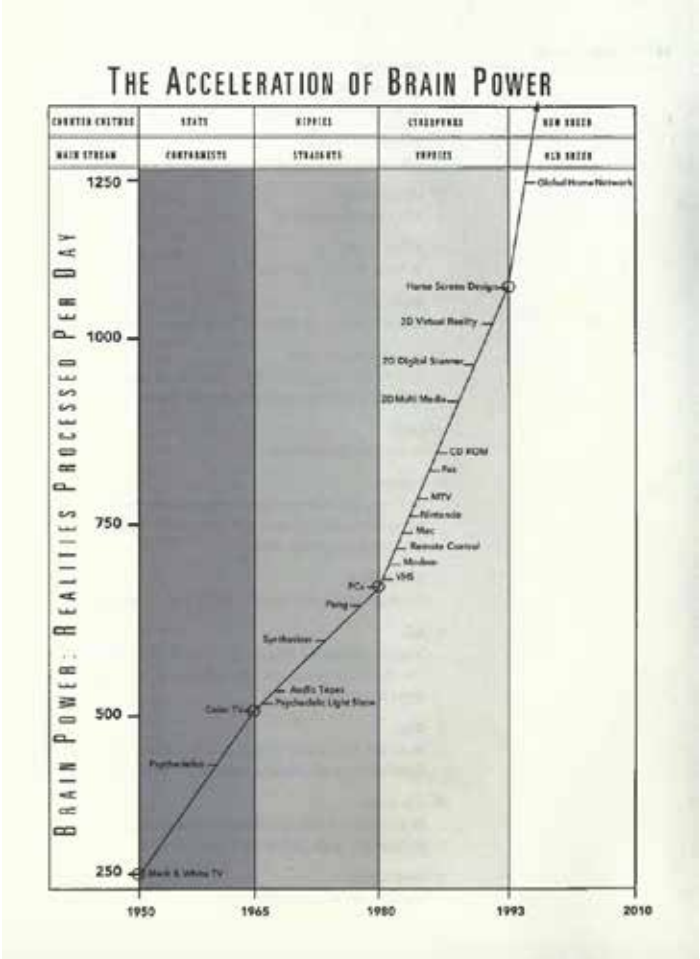
Timothy Leary
Born: Timothy Francis Leary
1920
Springfield, MA
Died: 1996
Red Hook, NJ
Nationality: American
Occupation: Writer, Psychologist
Genre: Counter-Culture
Subjects: Psychedelics, Drugs,
Cyberpunk, Politics,
Technology

This Page: Fig. 17 : Original graph on the accel-
eration of brain power, Timothy Leary, 1995
Next Page: Fig. 18: Adaptation of Leary’s “Accel-
eration of Brain Power”

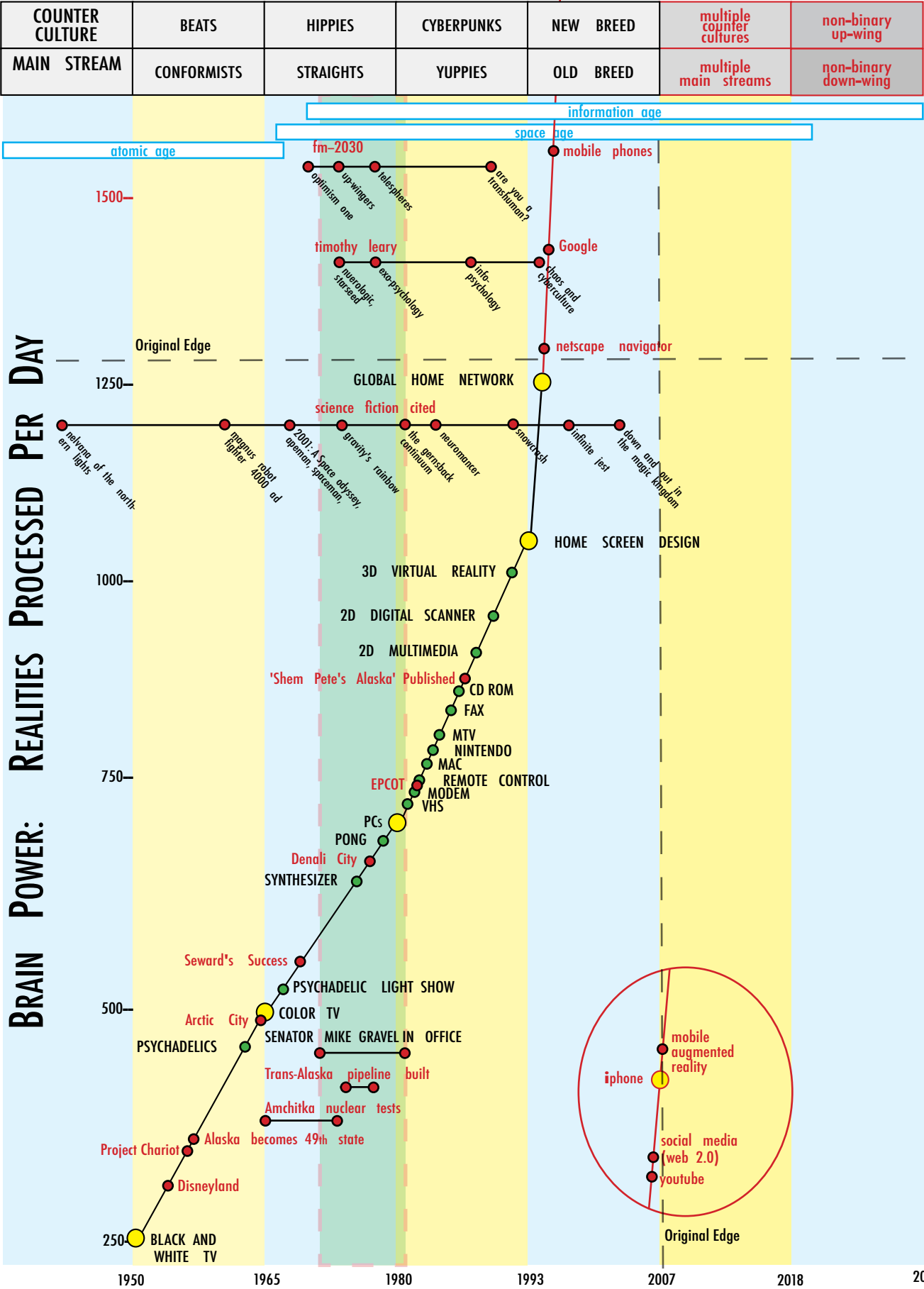
Lauded by modern transhumanists, extropy is the rate at which people bring order to things, a human-made antithesis to entropy. In *Starseed*, Leary referred to the second law of thermodynamics as “a pessimistic nineteenth century fraud.” (Leary, 6) Unlike most science fiction after 1980, also called cyberpunk fiction for brevity here, transhumanism does not trade in dystopian ideas, which is probably why it didn’t garner a larger seat at the table, and is currently regarded as a worldview suited only for extremist technophiles.

Cyberpunk and transhumanism have informed each other for decades, and technophiles can be both without any sort of philosophical conflict, the way a Christian can believe in Darwinian evolution. Leary regarded himself as a cyberpunk and saw cyberpunk as the countercultural movement of the 1980s and early 90s, being an extension of the previous one between 1965 and the late 70s, the Hippies, which Leary was connected to during his earlier psychedelic days, pre-Folsom. Leary draws little differentiation between cyberpunk and transhumanism, but I would like to place an emphasis on the disconnection between these worldviews that are ref-

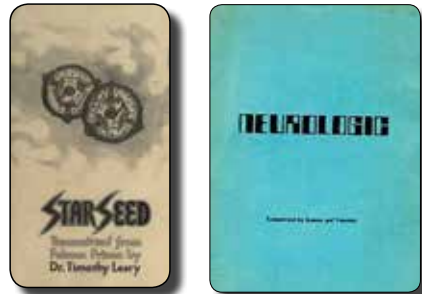
Fig. 17



THE ACCELERATION OF BRAIN POWER



UPLOADS



Timothy Leary, *Starseed* and *Neurologic*, both 1973



JBS Haldane, *Daedalus, or Science of the Future*, 1923



JD Bernal, *The World, the Flesh and the Devil*, 1929

flections on the future, and as Leary himself said, “true unity is contacted through increasing precision of differentiations.” (Leary, 6)

Cyberpunk is the dystopian future fictions, with cyberspace and body modification being chaotic good, bad and neutral. Transhumanism is the utopian futurological ontology using cyberspace and body modification to transition into posthumanism. In science fiction, transhumanism, as a form antithetical to cyberpunk, is sometimes referred to as cyberprep, but I find that differentiation better suited for pure literary criticism and not digital humanities, as fun as it may be to go down that path. Using the term ‘transhumanism’ invokes a much broader set of philosophical and socio-economic worldviews than a writing style that is the literary counterpoint of cyberpunk.

Cory Doctorow’s novel, *Down and Out in the Magic Kingdom*, provides an example of this reflective disconnection. His main character, Jules, moves between the two genres of cyberpunk and transhumanism. It starts out cyberpunk, with a high-tech murder, crack addiction, and a sprawling series of adhocracies that have taken over the rides at Disney’s Magic Kingdom. As Jules grows more and more weary of his cyberpunk existence in the adhococracy, he remembers his transhuman life before living in the Magic Kingdom, in the ‘Bitchun Utopia’, a series of bubble domes, rotating in low-earth orbit, where humans float about in various states of body modification, with instant access to everything possible, seeking pleasure in large collectives resembling FM-2030’s description of telespers and mobillas, patterned heavily on the habitable spheres from Bernal’s treatise from 1923. Here, humans have created a utopia providing all of the survival needs for every human as a universal right, to get there they simply had to convert all of the technophobes to technophiles. People in this future tale can go about in a sliding scale of utopian ontologies, but universal health care and life extension are available, even to those living in the adhococratic sim-rides. Orbital bubble dome cities, or **Bernal Spheres**, are our prediction of the long future from now (Fig. 19); domed cities are our training wheels for that kind of living. Compare this to one of the high orbit bubble domes from *Neuromancer*, Villa Straylight, making up one end of a spindle-shaped space station named Freeside, owned and operated by the Tessier-Ashpool Clan, an evil corporate dynasty in the novel. The frozen bodies of the Tessier-Ashpools are kept in Villa Straylight, along with a squadron of their clones and space ninjas, all administered by the corporate family’s personal AI systems that are confined to separate parts of the Earth through a series of Turing Locks, keeping them from merging or acquiring too much power, thus preventing them from becoming super-in-



Fig. 19: Interior of a Bernal Sphere, Rick Guidice, artist conceptions commissioned by NASA.

BERNAL SPHERES

1. What is the difference between a Bernal Sphere and a domed city?
2. Why do we refer to them as “Bernal Spheres”?
3. **Interactive Content** Scan the target image above to see more images of Bernal Spheres produced by NASA in the 1960s.

SPACE PEOPLE

In *The World, the Flesh and the Devil*, J.D. Bernal predicted many things about the future of humanity. One of the most enduring notions is the idea of Bernal Spheres, his concept of how humans will build colonies in space as a means of survival beyond the age of the Earth.

Up-Wingers and the End of the World

VOCABULARY

- bernal spheres**
a type of space habitat intended as a long-term home for permanent residents, first proposed in 1929 by JD Bernal
- eschatology**
any system of doctrines concerning last, or final, matters, as death, the Judgment, the future state, etc
- up-wingers**
an alternative philosophy to the normative left versus right political duality to be progress versus regression
- vitrification**
the act of vitrifying, to convert or be converted into glass; in cryonics, bringing tissues to cryogenic temperatures without freezing or cellular damage

The masochistic anxiety for the end of the world sells, but these forms of **eschatology** change just as much as everything else. Apocalypse is a semiotic ghost just like all other memes in this world. Domed cities operate in this disconnected apocalyptic thinking. More often than not, we consider domed cities to be ways humans may be able to survive the eventual demise of civilization, which leads to more dystopian tales as the world carries on and we try to remain here. We are constantly moving the goal posts on the apocalypse, and we may still have a bit of time to rethink things before our robot overlords turn us into batteries. What we have left in this line of thinking is to abandon ‘survival behaviors’ as FM-2030 called them and embrace progress to the next realms, full heart. In Leary’s countercultural worldview, the cyberpunks must become the ‘new breed’.

FM-2030 proposed an idea, the structure of which he co-opted from a speech given by Ronald Reagan for Barry Goldwater in 1964, **up-wingers**. Fig. 20) The idea of up-wing is simple, albeit very structuralist in nature. There is a binary, right now, the politics of the world are left versus right, but to FM-2030’s mind, the politics of the future would be people who believed in progress (up) and those who did not (down). There is a direct correlation here between the technophobes and technophiles in Doctorow. In Reagan’s speech, entitled “A Time for Choosing”, he defined ‘up’ as those who believed in individuality and ‘down’ as those who preferred totalitarianism. From very different perspectives Reagan and 2030 both saw future progress involving less and less government oversight, with less collectivism and more collaboration.

To get a better understanding of him, FM-2030 was a Persian born Fereidoun M. Esfandiary in Brussels, Belgium, 1930, and changed his name to reflect his belief that he would live to be 100 years old and that conventional names were a relic of a religious and tribalist past. He did not quite make it to 100 years of age. He opted for full body **vitrification** (freezing that prevents cellular damage) at the time of his metabolic death in 2000 (his whole body was put into cryonic suspension, rather than the more popular form of cryonic suspension, neuropreservation, where nothing but one’s disincorporate head is vitrified). FM-2030 believed in progress on all human fronts: intelligence, society, community, culture, technology and design. Ultimately, he saw

liberalism becoming up-wing. But remember, he co-opted this phrase from Reagan, who was literally saying the same thing while launching his political career, though obviously with a very different meaning of up-wing implied. 2030 had no reason to appeal to voters; in his words he simply had a “deep nostalgia for the future.” Reagan’s notion of up-wing is squarely rooted in conservatism being the only way for humans to progress and any language he used was to move that agenda forward, whether he truly believed it or not. As far as this aspect of the culture war goes, Ronald Reagan is in the history books as a conservative icon, but his ‘up’ philosophy is inconsequential. FM-2030’s ‘up-wing’ has survived in a myriad of formats, from social clubs and online forums to science fiction and technology, but he is currently regarded as an obscure futurist from the 20th Century, not worthy of much consideration when compared to futurists like Buckminster Fuller or even Timothy Leary, and in no way on scientific par with J.B.S. Haldane or J.D. Bernal, as he really never accomplished anything scientifically, but rather wrote and spoke as a futurist philosopher.

Arctic City, Denali City and Seward’s Success are by nature transhuman cities and they suffered a similar fate as the philosophy. Rather than wag a finger and persevere on nostalgia for an age that never existed, these cities were actively predicting a better future, by incorporating transhumanism’s indefatigable optimism.

UPLOADS



FM 2030, The Up-Winger Manifesto



UP-WINGERS

1. Who coined the term “up-winger”? What did it mean to them?
2. What is the context for an ‘up-wing’ political philosophy?
3. Did the prediction of ‘up-wing’ turn out to be true for either Ronald Reagan or FM-2030?
4. **A Futurist Manifesto** FM-2030 wrote an entire manifesto on being ‘up-wing’. It can be found following this augment to the right.

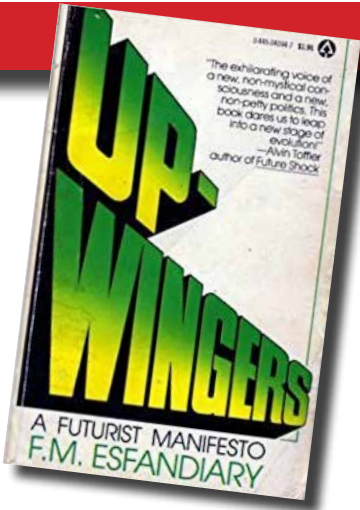


Fig. 20: Ronald Reagan, A Time for Choosing, 1964, Televised Speech



Three Hundred Years Hence

There have always been tales of hidden cities above, or secret cities below the surface of the earth, since we decided cities was a thing we wanted to do. An example of this is the “strange frozen world of **Glacia**”, which appeared in the early issues of *Nelvana of the Northern Lights*. (Fig. 21) *Nelvana of the Northern Lights* debuted in 1941, as the first comic book superhero from Canada, four months before Wonder Woman would appear in *All-Star Comics*. Nelvana had many superpowers, including flight, telepathy, invisibility, and the ability to travel at the speed of light, by harnessing the northern lights. Glacia is an underground domed city filled with frozen, sleeping beings, which Nelvana can see through a large glass floor she lands on while descending underground. Glacia is being threatened by a race of reawakening, prehistoric Mammoth Men, over several issues she travels through Glacia, when suddenly surface reality strikes, as a Japanese bomb (this is 1941) breaks the glass dome of Glacia from above—Nelvana must begin fighting on the surface again. This is also one of the first instances of a domed city visualized for the polar regions, predating *Magnus, Robot Fighter*.

Fantastic elements aside, the specific domed hometown trope we are looking at here is a city that has been enclosed, or partially enclosed, and is used for living—though Glacia definitely fits this bill. The first published instance of domed cities appears in literature, rather than urban planning or science, in a seldom-read ethnocentric novel from 1881 entitled *Three Hundred Years Hence, or a Voice From Posterity* by William Delisle Hay. The first instance of domed cities being proposed in an urban planning context would come a bit later, with Buckminster Fuller and Frei Otto in the mid-twentieth century, almost 80 years later, slightly before the proposal for New Town I at Frobisher Bay, though science fiction had been running with those scissors since Hay. Fuller’s most recognizable plan to build an actual dome was his proposal to cover Midtown Manhattan in a geodesic dome. (Fig. 22) These are also just instances of domes being proposed on the surface of the Earth, keeping in line with the notion of domed cities here. J.D. Bernal predicted humans would build habitable spheres in space imitating the Earth’s atmosphere, well before any mid-century concepts, in *The World, the Flesh and the Devil*, an idea that would later be called Bernal Spheres, as mentioned earlier. Villa Straylight from *Neuromancer* is more properly referred to as a Bernal Sphere than a bubble dome. Bernal understood the difference between designing a domed city on Earth and the necessity to remove it from the planet as a means of long-term human habitation.

“All these developments would lead to a world incom

VOCABULARY

Glacia:
an ancient, underground, domed city found in the comic book *Nelvana of the Northern Lights*

UPLOADS



Post-Apocalyptic Crackerverse Hypothesis

Three poetry chapbooks written by Devon “Peach” McGillis, one of the dirigible pilots from the National Geographic Channel’s reality television show *Dirigibles of Denali*.



Fig. 21: Nelvana discovering the hidden city of Glacia, from *Nelvana of the Northern Lights*, 1941

NELVANA of the NORTHERN LIGHTS

Vital Stats

Name: Nelvana
Alter Ego: Alana North
Nationality: Canadian
Occupation: Superhero
Powers: Flight, Telepathy, Invisibility, Light Speed when harnessing the power of the northern lights
Family: Koliak (father), Tanero (brother)
Affiliations: Mountie Corporal Keene
Published: 1941, Triumph-Adventure Comics



VOCABULARY

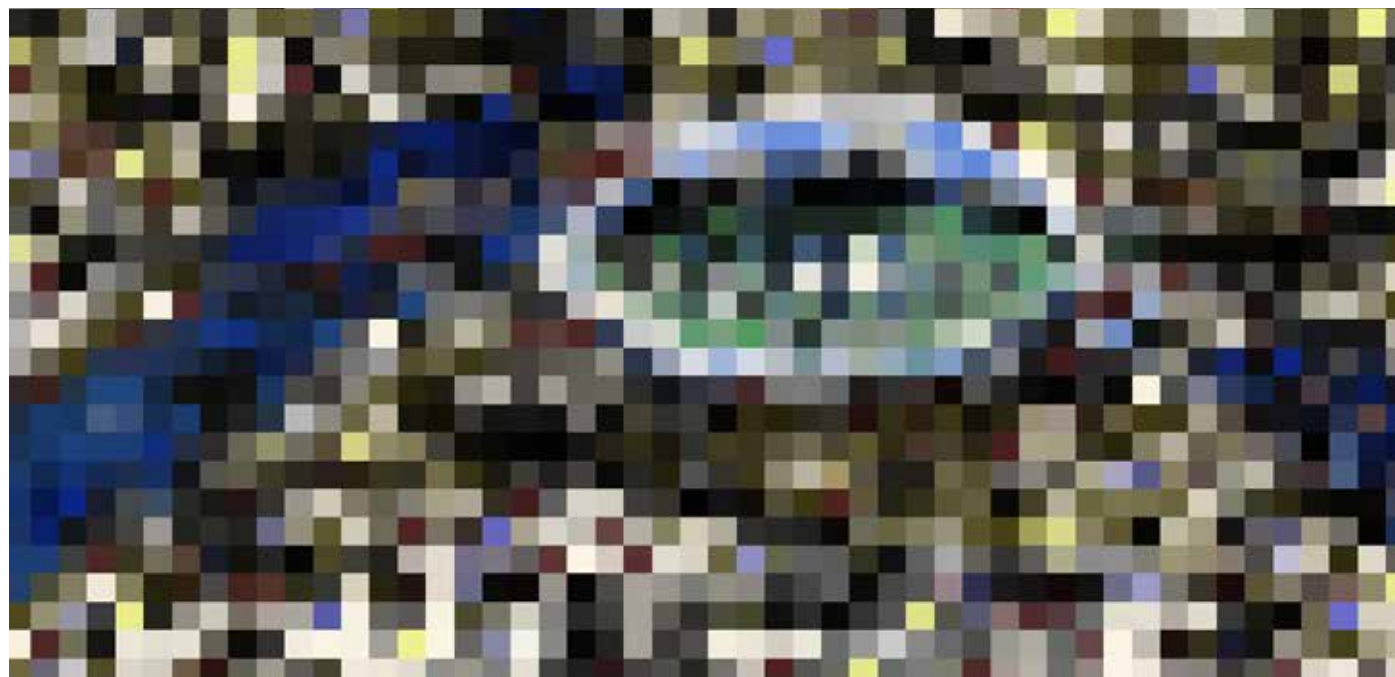
monoculture
a culture dominated by a single element : a prevailing culture marked by homogeneity

Unilang
a universal language to be used by all people in the future (English)

parably more efficient and richer than the present, capable of supporting a much larger population, secure from want and having ample leisure, but still a world limited in space to the surface of the globe and in time to the caprices of geological epochs. Already ambition is stirring in men to conquer space as they conquered the air, and this ambition – at first fantastic – as time goes on become more and more reinforced by necessity.” (Bernal, 6) With the amount of seismic activity Alaska experiences, domed cities in this region of the Earth are rather careless, again why Denali City and Seward’s Success gave no mention of megastructure domes over an entire city.

Rather than being museums or time capsules preserving humanity, the domes Hay described were reverse aquariums, underwater glass-covered cities, built deep at the bottom of the ocean as domed hometowns for the white race while the time-tested whites went about dominating every aspect of surface life on the planet. Given the political history of colonial city building from the Romans to Napoleon and from there, into the British Empire and American Manifest Destiny, it is no real surprise to find domed hometowns being originally envisioned alongside a philosophy of racial superiority. Installing a **monoculture** over the top of an existing culture is a universal service provided by all colonizers, whether it is grid-based roads, breathable air, or getting technophobes to join the Bitchun Society. Monocultures are one of the key features of global societies. FM-2030 proposed renaming English to **Unilang**, short for ‘universal language’, because most of the global community had already embraced the usage of English as the default trade language in his time, continuing on to this day.

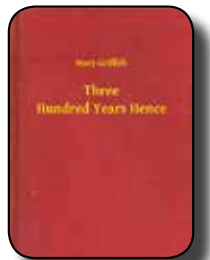
Fig. 22: Nathan Shafer, Bitmap-Midtown Dome, based on Fuller’s proposal



The Other Three Hundred Years Hence

As it happens, there was another science fiction story already written entitled *Three Hundred Years Hence*, by Mary Griffith from 1836, before Hay regaled the Western World with his sophistry. This novel appeared in a collection of Griffith’s stories called *Camperdown, or News From Our Neighbourhood*, and is considered to be the first utopian fiction written by an American woman. The hero of Griffith’s tale is in suspended animation and awakens in a far future north-eastern United States gone utopian. Not to languish praise on him, but Hay was probably unaware that Griffith had already written a speculative fiction story of the same name, given the twenty-five year difference between the two and the fact that Griffith was publishing out of the U.S. and Hay, England. By the time Hay was publishing, *Camperdown* had become an obscure book, even in the United States. But she had the title first, so it is hers. In his day, Hay was a member of the Royal Geographic Society and traveled around the world, specifically in New Zealand, where he set a couple of his tomes. His novel written the year before *Three Hundred Years Hence*; *The Doom of the Great City, Being a Narrative of a Survivor, Written A.D. 1942* (1880), is set in New Zealand and dabbles in the same eschatological telling of a world destroyed that *Three Hundred Years Hence* does, this time though, our ultimate demise takes the form of a poisonous London fog.

POINTS OF INTEREST



Mary Griffith

Born: Mary Corre
1774
Died: 1846
Red Hook, NJ
Nationality: American
Occupation: Writer, Horticulturalist, Scientist
Genre: Utopian Fiction
Subject: Agriculture, Social Reform



UNILANG

UNIVERSAL LANGUAGE

Both a pragmatic as well as a controversial proposal, FM-2030 considered the need for a universal human language, so that humans across the planet, and eventually off-planet, would be able to communicate with each other using a common tongue.

1. What does ‘Unilang’ stand for?
2. Is there another language besides English that would make a better Unilang?
3. **Post-Colonial Thought Experiment** What happens to all of the ‘endangered languages’ in a transhumanist society? Do they go extinct for the betterment of the entire species? Is that the betterment of the entire species? Does linguistic diversity play a role in this future philosophy? Is it possible to have living language be a part of the big, long future?

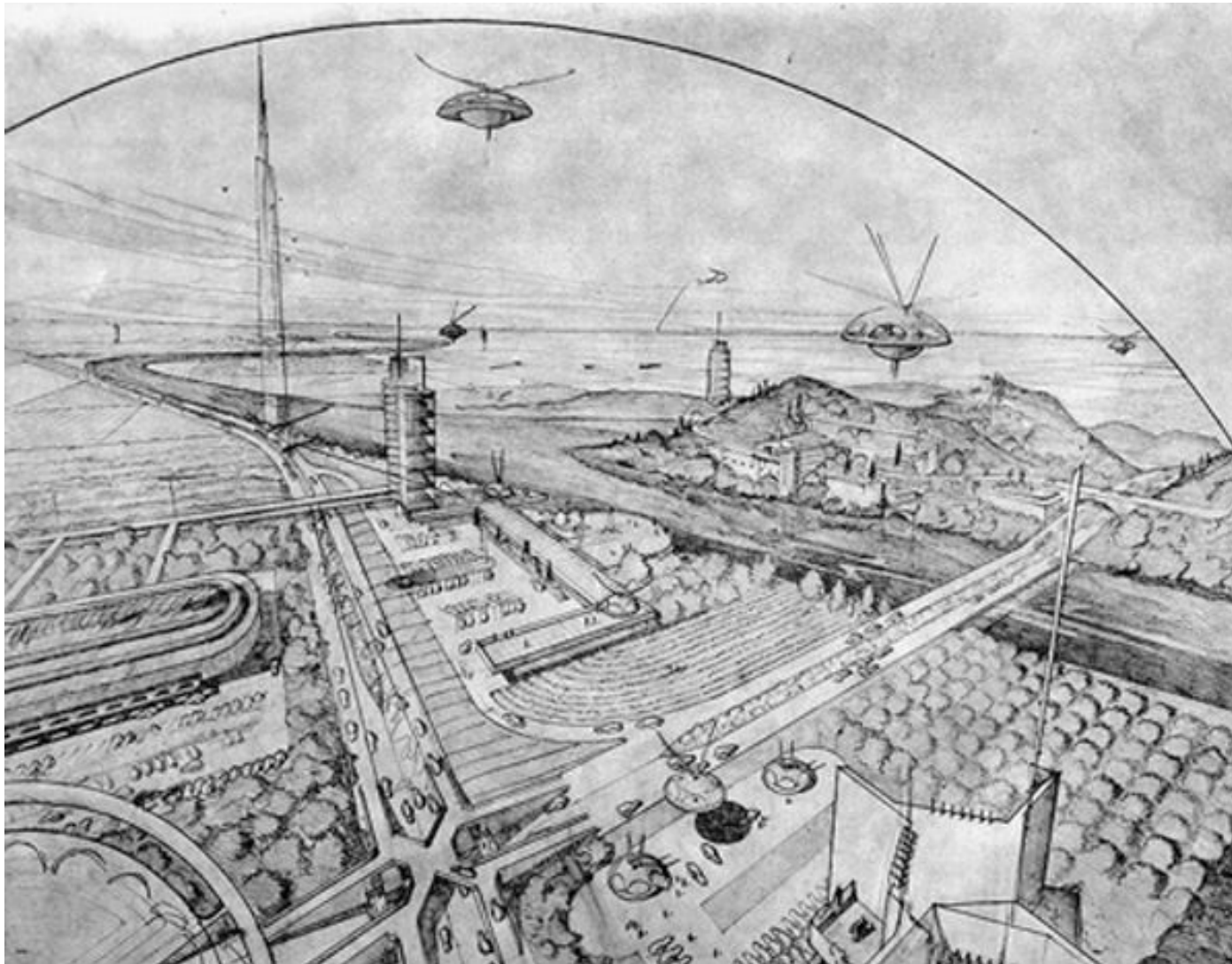
VOCABULARY

steampunk

a subgenre of science fiction and fantasy featuring advanced machines and other technology based on steam power of the 19th century and taking place in a recognizable historical period or a fantasy world

With *Three Hundred Years Hence*, we have the origin of domed cities, poised to become more in our popular imagination. Albeit in a book that has not really survived to us today in any meaningful way (I am not counting the private libraries of white supremacists as specifically meaningful here, we know of Hay's novel due mostly to descriptions in literary catalogues). Put on a timeline, the first literary mention of domed cities came after the invention of the steam engine (1698) and before the advent of radio (1890). This gives a context for how domed cities are perceived by readers in relationship to all other technologies in science fiction, they are very old school. Though the domed city is a space age aesthetic in many ways, it has a longer history in our collective imagination than many other technologies, much like the trope of space travel or humans going to the moon, which were tropes in science fiction decades before humans would actually become a space faring species. Technologies either imagined or existing, and appear between the advent of steam power and radio are referred to as classical 'steampunk' tech, and are the default technologies used to tell steampunk tales.

Fig. 23: Broadacre City, Frank Lloyd Wright, 1958



Extra: ROBINSONADE & OTHER DERIVATIVES

ROBINSONADE

Daniel Defoe's 1719 novel, *Robinson Crusoe*, spawned so many derivative works that it invented a literary genre referred to as **Robinsonade**. Robinsonade stories all had similar settings, of a civilized man trapped or marooned in a savage land.

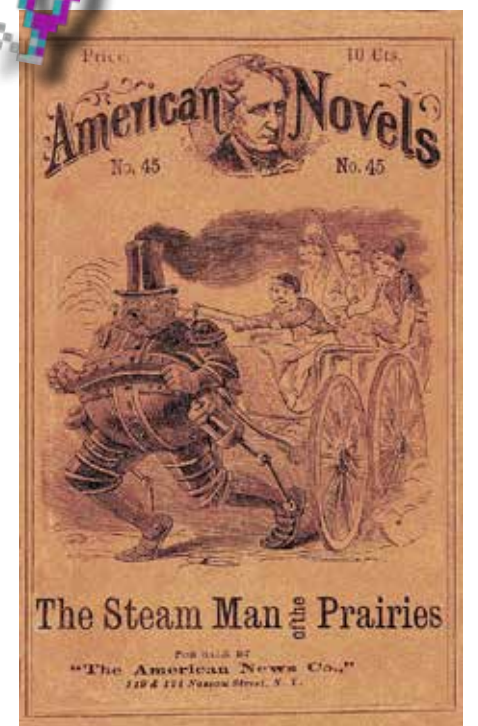
Robinsonade stories are relatively dystopian in nature, and colonialist in their worldviews. Later examples include: *Swiss Family Robinson* and *Lord of the Flies*.

EDISONADE

In 1993, John Clute coined the term **Edisonade**, to describe a similar set of derivative literature that appeared in late 19th century and early 20th century dime novels.

Like Robinsonade tales, Edisonade stories follow a brilliant young scientist (usually male) as they must put their brain to the task, or invented something to save the world and/or the girl.

Also like Robinsonade stories, Edisonades explored the 'uncivilized' parts of the world in a colonialist fashion. Examples include *The Steam Man of the Prairies* and *Edison's Conquest of Mars*.



Literary Punk

Cyberpunk Derivatives

The American author Bruce Bethke coined the term 'cyberpunk' in a novel he wrote in 1980, *Cyberpunk*, which was eventually published in 1983. The term gained popularity as a descriptive term, and was applied to William Gibson's novel *Neuromancer*, which was published in 1984.

Steampunk, in the greater canon of literary punk, which are all derivative of the original cyberpunk genre, is science fiction which looks at a past that might have been, as opposed to the dystopian future worlds of cyberpunk. It can be characterized by many stylistic flourishes: gears, dirigibles and blimps, Babbage's analytical and difference engines, anything **Ada Lovelace**, Victorian-era outfits. It takes much of its literary inspiration from authors such as **Mary Shelley**, Jules Verne and H.G. Wells. The technology in these stories is very specifically 19th Century industrial steam powered machinery, including all spaceships and robots, should they be needed. J.D. Bernal noted, "So far we have been living on the discoveries of the early and mid-nineteenth centuries, a macro-mechanical age of power and metal. Essentially it succeeded in substituting mechanism for the simpler mechanical movements of the human body, with steam and later electrical power in the place of muscle energy." (Bernal, 4)

Steampunk is how modern literary punk looks back at the 19th century to tell stories, and more often than not it is

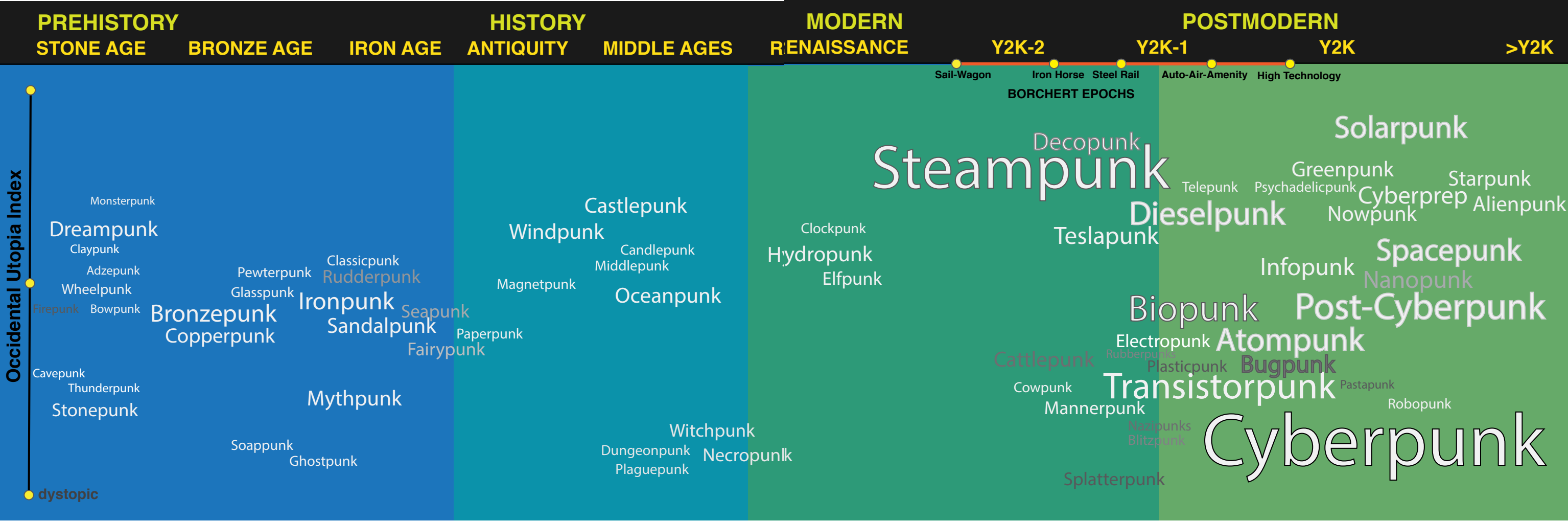
about the utopia that might have been. The subgenre terms in literary punk (also called postcyberpunk) are tenuous at best, and have a tendency to make hyper significances out of moderate differences in content or style, but keeping in line with Leary, calculating these "differentiations leads to true unity". Seeing as how 'punk' is a term from 20th century rock music, and that it carries with it a certain set of countercultural values, the nomenclature of literary punk can appear procedurally indulgent, but it has a format that makes a good bit of sense, when looked at from the context of future studies.

Literary punk is all based on the history of technology, even though it is used in a rather fluid way. For example, steam-era dirigibles feature very heavily in steampunk and hydrogen-powered zeppelins feature in dieselpunk (post-radio, World Wars I and II era literary punk, where the tech moves from steam to diesel powered). Dieselpunk extends from the diesel age into the atomic age with atompunk, somewhere between the advent of black and white television (1950) and color television (1965), and so on and so on. Less well known examples take literary punk further back in time, creating derivations such as clockpunk, bronzepunk and stone-



Fig. 25: Book Cover for Cyberpunk! by Bruce Bethke, 1983

Fig. 24: Timeline of Literary Punk on an Occidental Utopian Index



VOCABULARY

raygun gothic
a catchall term for a visual style that incorporates various aspects of the Googie, Streamline Moderne and Art Deco architectural styles when applied to retrofuturistic science fiction environments.

optimism one
FM 2030's proposed term for the 'Space Age'.



Fig. 27



Fig. 28

Above: 26 & 27: Tandy Industries, Seward's Success, 1968.

Both images above are artist's conceptions of Seward's Success. Pictured on top is an interior view of the Petroleum Center, with public art work. Image below is a view of the city from downtown Anchorage, at the air tram station.

punk—a cyberpunk subgenre for every technological era, so to speak.

Alaska's 'domed' city proposals were ultimately envisioned and proposed because the oil revenue of the mid 1960s was making the future economy of Alaska look particularly fortuitous, all, right at the tail end of the era of atompunk. Typical atompunk imagery, the instantly recognizable look of the Jetsons or Googie architecture is called **Raygun Gothic**, a term coined by Gibson in the same story where the term 'semiotic ghost' appears, "The Gernsback Continuum". To find good examples of Raygun Gothic, one has to look no further than the painted artist visualizations for Seward's Success, included in its original proposal. (Fig. 28)

There is a void in literary punk in the period between color T.V.s (1965) and personal computers (1980-ish), the exact time period, where our three cities were proposed. But, for all intents and purposes, this is the space age, even though technically the space age is considered to have begun with Sputnik in 1957. Space Age literature was highly mediated and ubiquitous, this is the time period when Star Trek and Star Wars appeared, science fiction was just at home in the movies or on television as it was in print, and sci-fi authors were beginning to tire of the old style for telling their stories there. The United States and the Soviet Union were embroiled in a space race, seeing who would be the first in any of the many different human endeavors in outer space, landing on the moon, establishing a permanent space colony, going to Mars, etc. Nuclear proliferation between these two superpowers was inflating simultaneously. This is a transitional period between utopian sci-fi and the cyberpunk dystopia, when actual cyberpunk fiction and transhumanist philosophy for that matter, were coming into existence. Obviously, the post-cyberpunk derivation for the years directly after the space age void, roughly the years between the personal computer (1980) and smart phones (2007), is the cyber age, which would make the derivations of themselves whatever the contemporary fiction or available technology of the day was—cyberpunk, tenuously. Leary's list of technology from the first cyber age includes: "VHS, modem, remote control, Mac, Nintendo, MTV, fax, CD ROM, 2D multi-media, 2D digital scanner, 3D virtual reality" and ending the era with "home screen design" in 1993 (coincidentally, the same years that saw more generalist use of the Internet, and by 1994, the Internet was being explored using publically available Internet browsers). Leary rounds up for the countercultural predecessor of the cyberpunk, the 'new breed' with the advent of 'Global Home Networks', effectively, the era of Leary's 'cyberpunk' evolves into something 'new' when the literally real version of cyberspace finally starts being widely used in the homes of people who are not fictional

Diagram for the computation by the Engine of the Numbers of Bernoulli. See Note G, (page 777 of seq.)

Number of Operations Series of Operations	Variables Series of Variables	Variables Series of Variables	Indication of change in the value of any Variable	Statement of Results	Data										Working Variables										Result Variables									
					V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8	V_9	V_{10}	V_{11}	V_{12}	V_{13}	V_{14}	V_{15}	V_{16}	V_{17}	V_{18}	V_{19}	V_{20}	V_{21}	V_{22}	V_{23}	V_{24}	V_{25}	V_{26}	V_{27}	V_{28}	V_{29}	V_{30}
1	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
2	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
3	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
4	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
5	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
7	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
8	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
9	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
10	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
11	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
12	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
13	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
14	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
15	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
16	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
17	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
18	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
19	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
20	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
21	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
22	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
23	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
24	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
25	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
26	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
27	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
28	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
29	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
30	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	$V_1 \times V_2$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Here follows a repetition of Operations fifteen to twenty-nine.

Fig. 26: Lovelace's Diagram From Note G, "Diagram for the Computation by the Engine of the Numbers of Bernoulli", regarded as the first instance of a printed computer algorithm. This algorithm was run on the analytical engine.

POINTS OF INTEREST: ORIGINS

Science Fiction and Computer Programming



Mary Shelley

Born: Mary Wollstonecraft Godwin
1797
London, England
Died: 1851
London, England
Nationality: English
Occupation: Writer
Invented: Science Fiction

Mary Shelley is considered to be the mother of science fiction, with her publication of *Frankenstein; or, The Modern Prometheus*.

Ada Lovelace is considered to be the mother of computer programming with her work on Charles Babbage's Analytical and Difference Engines. There would be no literary punk aesthetic, let alone science fiction as we know, it without the pioneering work of these two women.



Ada Lovelace

Born: Augusta Ada Byron
1815
London, England
Died: 1852
London, England
Nationality: English
Occupation: Mathematician
Invented: Computer Programming

Uploads



Tandy Industries, *Seward's Success: The Twenty-First Century City*, 1968



The Gravel Archive, *Gravel Proposes McKinley Bubble*, 1972-1980, 2018

characters but rather actual living beings.

Compare this with a timeline of the same period by FM-2030, where he referred to the Space Age as “**Optimism One**”. Seeing that moment in human history as the first age in which humans were collectively adopting a more optimistic mindset, and embracing progress, no longer wallowing in the savagery, religious fanaticism, and misanthropic institutions of our former selves. When 2030 was writing this however, there was not a word for the age—it was being invented. From *Telespheres*, 1977, “What will we call this new orbit in evolution and history?”

Age of Breakthroughs
Age of Abundance
Age of Cybernation
Age of Liberation
Electronic Age
Global Age
Space Age
Post-Human Age
Age of Agelessness
Cosmic Age

The new age is obviously all of these things and more.” (Es-fandiary, 23)

Science itself was one of the reasons this was possible; and science fiction was forever changed in the space age as we actually landed humans on the moon, were actively sending artificial satellites into space and began looking at other planets to colonize. This is precisely where domed cities gain momentum, as they are a colonial enterprise, spurred on by technological innovation. The only way humans were going to colonize space was to bring little domes recreating our own atmosphere with us. Couple this with the growing consciousness of the natural environment and sustainable, green technology becomes part of the conversation, on how to build a domed hometown with arcology.

RAYGUN GOTHIC

1. What are some other examples of ‘Raygun Gothic’ architecture?
2. What are some common themes of ‘Raygun Gothic’ architecture?

“THE GERNSBACK CONTINUUM”, (Part 2)

Gibson’s coining of the term ‘Raygun Gothic’ in “The Gernsback Continuum” has become the short-hand term used to describe retrofuturistic architecture, or architecture that might have been.

Mag Lev Trains of Denali

Even though Seward’s Success incorporates late-60s era green energy, with its carless streets, etc., Denali City is the one that stands out for updating the steam, diesel and atompunk tropes in its urban design, specifically in public transportation (I am not considering the air trams at Seward’s Success as technologically innovative proposals here, though they were noteworthy in other aspects). There were two big modes of transportation into Denali City, which were to be major highlights of the city and add big tourism draws for traveling there. The first being our ‘dirigibles for Denali’; the other—high-speed **mag lev** trains (magnetic levitation). They would have connected Denali City with the rest of the state. Both of these methods contain that combination of anxious past and non-reflective present defining space age cities from the past, although there is nothing in today’s technology preventing dirigibles or superconductive trains from working, and indeed they may still prove to be valuable modes of transit in the future of Alaska. Especially when megaprojects like the Trans-Eurasian Belt Development (a railroad connecting London to New York City by way of a New Bering Bridge between Siberia and Alaska), are taken into consideration. (Fig. 32)

The addition of the mag lev train system is one that really should have piqued interests in the building of a leisure city of the north. The American incarnation of Alaska is one that was built by the railroad—images of the blue and yellow trains of the Alaska Railroad are a visual signifier for the state of Alaska all over the world. Though the highway system in Alaska connects many cities and towns to each other, it does not connect them all. The small pockets of urbanism in Alaska are by several orders of magnitude more connected through railroad, ferry and aircraft. It should be noted however that if the domed cities had been constructed, both Seward’s Success and Denali City would have been accessible by car, by way of the main highway system in Alaska, where the great bulk of Alaska’s relatively small population resides. Arctic City here stands alone as the one that would have been accessible only by boat, plane, dirigible or train, had its planners actually found a suitable locale in Alaska. More than anything, this really speaks to the practicality of Seward’s Success and Denali City. For as much fantastical thinking as went into their conceptions, they were designed to be functional cities, not proto-Martian Shangri-Las.

Taking the terminology of steampunk away for a moment, we are left with an issue of practicality, the real difference between the two stories both named *Three Hundred Years Hence* is the same issue of two worldviews named up-



Fig. 29: Closer Than We Think! High-Speed Mag-Lev Trains

Below: Fig. 30: Richard Perry, Wild Man, illustration

Uploads



Fiction Set in Denali City

Lucas Rowley **PACK MIND**

Leslie Kimiko Ward **ELEPHANTS OF DENALI**

Richard Perry **DENALI CITY AND THE WILD MEN**

Skywalker Payne **STORY SANCTUARY**

Joshua Medsker **SATURDAY NIGHT AT THE DENALI DOME**



Fig. 31

This Page:
Fig. 30: The Alaska Railroad; **Fig. 31:**
 Map for the Trans-Eurasian Belt Develop-
 ment

Next Page:
Fig. 32: Patrick Lichty, Arctic City, 2017

VOCABULARY

mag lev
 magnetic levitation used in transportation

wing. Hay's novel is a history of what happens after a great Future War, where the world is destroyed and the survivors have utilized domed hometowns as a way of existing in a future dystopia and Griffith imagines a natural evolution into a utopia in humanity's future. It becomes a speculative hiccup on how we eventually get there. Is it a utopian future because only the white race has survived, or is it a utopia brought on by people figuring out how to live with each other? Up versus down.

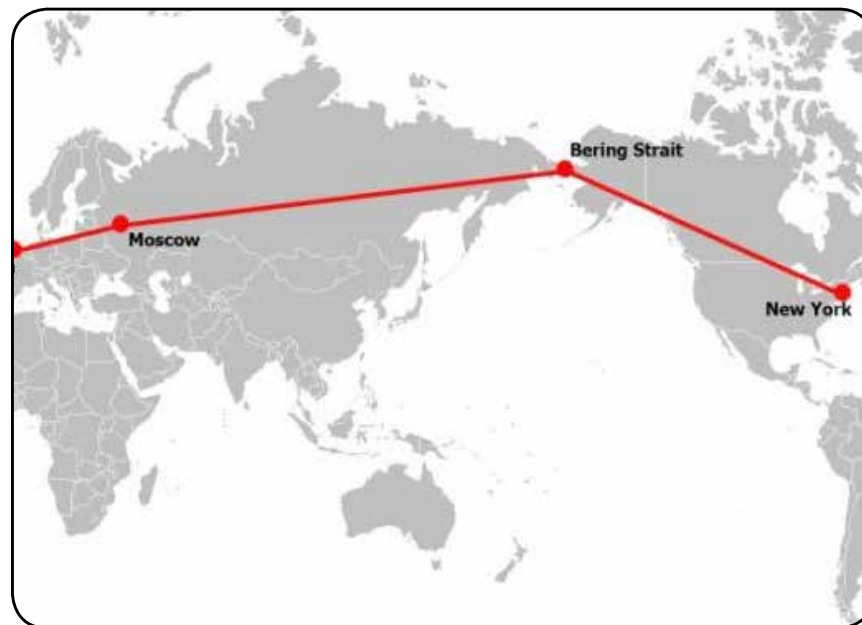


Fig. 32

MAG LEV

1. What does mag lev stand for?
2. Do you think mag lev transportation will be used 100 years from now for travel?
3. Why do you think mag lev was proposed for Denali City?



Post-Cyberpunk Derivation

Postcyberpunk derivation looks to close out the cyber era with solar power, solarpunk, if you will. This recalls the machine power metaphor of the earlier derivations, and may well be Optimism Two, as alternative energy is gaining momentum, but not fully changing the era. There are a couple really interesting things about putting the forced derivation of solarpunk into the conversation. First things first, as president, the noted up-winger Ronald Reagan actually removed the solar panels his predecessor Jimmy Carter had installed on the roof of the White House (Fig. 33), because, as President Carter should have known, the politics of the future is not left versus right, but up versus down, and no one should be forced to have free energy from the sun. Additionally any other sustainable power alternatives like solar power sound cool, but evoke the same semiotic ghosts as stonepunk: windpunk, geothermopunk, hydropunk, etc. Solar power is old too, older than the electric grid, a real steampunk technology. In 1878, Augustin Mouchot displayed an icemaker with a solar powered steam engine at the Universal Exhibition in Paris. (Fig. 34) The cheap preference for easily accessible coal ultimately doomed the fate of Mouchot's solar power though, and it became a viable technology languishing in history as a footnote for a century. This is in the same spirit that fossil fuels both inspired the proposals of Alaska's domed cities and ultimately undid them.

Solarpunk is an eco-friendly version of cyberpunk, and from the vantage point of 2018, part of the contemporary worldview that is looking back at the proposals for Alaska's unknown 'domed' cities, and forward to a world that might have been.



Fig. 33: Jimmy Carter Unveiling Solar Panels at the White House.

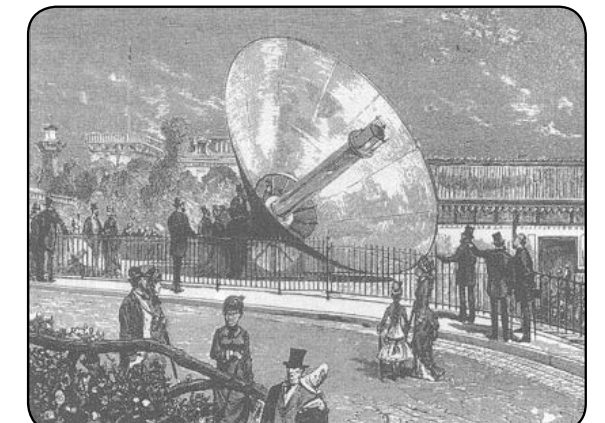


Fig. 34: Augustin Mouchot's solar powered steam engine of 1878.

UPLOADS



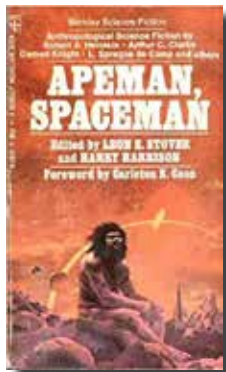
Fiction Set in Arctic City

Jaclyn Bergamino 
DISTORTION

Patrick Lichty 
THE ARCHIVE: DENALI

Multiple Players   
DIRIGIBLES OF DENALI

POINTS OF INTEREST



Anthropological Science Fiction

“Anthropology is the science of man. It tells the story from ape-man to space-man, attempting to describe in detail all the epochs of this continuing history. Writers of fiction, and in particular science fiction, peer over the anthropologists’ shoulders as the discoveries are made, then utilize the material in fictional works. Where the scientist must speculate reservedly from known fact and make a small leap into the unknown, the writer is free to soar high on the wings of fancy.” --Leon Stover, editor of *Apeman, Spaceman*

In 1954, four short years before New Town I, and a decade before Frei Otto formalized Arctic City, a short story written by Chad Oliver appeared in *Astounding Science Fiction* entitled, “Of Course”. It would reappear, with a wider readership in 1968, the year Seward’s Success was officially proposed, in an anthropological science fiction anthology named *Apeman, Spaceman: Anthropological Science Fiction* edited by Leon E. Stover and Harry Harrison. This anthology was a collection of both science and science fiction writings, which together formed a nice time capsule of science fiction in the space age.

“Of Course” is a tale about an advanced alien civilization 11 light years from Earth, who appear one day and announce to the world that they will be selecting a representative from Earth’s most advanced civilization, to take with them back to their home world, then bring back one hundred years later to start the next step in humans becoming an interstellar civilization. In a surprise move, the aliens select an Inuk from Baffin Island (misabeled as a Cental Yup’ik man) as the world’s representative. This is where I really wish the author had taken another path. The world in the story reels in disbelief over an Inuk man being Earth’s foremost representative, but eventually accepts the decision after a bit of conversation about some of the technologies the Inuit have designed: snow goggles and the like. And then, it cuts to the alien spacecraft, rocketing back towards their home world. The aliens are really people, laughing and carrying on, making fun of the primitive Earth for being such a canker sore in their sector of

Extra: CLOUD NINE, Transitional Bernal Spheres

STARS (a Spherical Tensegrity Atmospheric Research Station), or what Buckminster Fuller called *Cloud Nine* were proposed a series of terrestrial spheres, dirigible geodesic domes that had an interior temperature differential that allowed them to float. Some would have been tethered to the ground, others would have been allowed to float around the planet. These buoyant habitats worked on an architectural principal called “tensegrity”, which Fuller claimed to have coined. It is a combination of the terms “tension and integrity”. They are the transitional design between a domed city and a Bernal sphere.



Previous Page:
Fig. 35: Astropolis, from *Future Cities*, 1979

This Page:
Fig. 36: Buckminster Fuller, Proposal for *Cloud Nine*.

space—they cavort about, and watch the Inuk eat fish from a bucket they gave him. As they observe him mindlessly eating fish, he looks back at them simply and disinterestedly, barely human, definitely uncivilized. Man one says, “It must have been something of a shock when we selected *him*. An awfully nice chap, but he is a bit on the primitive side.” To which man two says, “A slight stimulus never hurt anyone, my friend. By the time they get through worrying about the Eskimo, they ought to have a *real* science down there.” (Oliver, 329) Italics are the original author’s.

This story stands out as an example of the way northern culture is perceived by those outside of it. I do not believe any of the people connected to the proposals of Alaska’s ‘domed’ cities were thinking anything like what Chad Oliver was getting at by making an “Eskimo” the butt of some racist interstellar prank, meant to jumpstart a global scientific revolution. Even Erskine’s panopticon-style proposal for a city in Resolute Bay did not go this far (Erskine’s city would have built a white settlement with an elevated city surrounding an Inuit village). After English and Spanish, Yup’ik (an Inuit language) is the most common language spoken in Alaska—it is a ubiquitous force across the state, and the history of treatment of Alaska Native people, as well as their languages and cultures by the U.S., is one of great shame and horror. The scars left by Alaskan boarding schools that would beat children for speaking their native languages rather than English seems all the more troubling when we reconsider the notion of English renamed to Unilang, the Universal Language, whether its intentions were benevolent or not. Righting these past wrongs is something that generations of apologetics and equity initiatives can help soothe, but it may never heal. Progress through monoculture and colonial thinking was still widely accepted and practiced as Alaska proposed three space age metropolises, because this philosophy was part and parcel with the rise of transhumanist philosophy. To this day, the stereotype that everyone in the Arctic lives in igloos persists, that the people of the north are savage and simple, only capable of survival behaviors. Mindlessly eating fish from a benevolently bestowed bucket.

Which brings us to some of the final ideas about domed hometowns before we segue into the recreations of these three unrealized cities using a soon-to-be defunct augmented reality. Returning briefly to Doctorow for a moment, and considering his notion that Disney’s Magic Kingdom, and all of its kind, will be taken over by technophile utopians, to create a series of ad-hocracies, whose legacy is the upkeep and preservation of the theme park rides. Part of Walt Disney’s enterprise in establishing his parks can be viewed as FM-2030’s notion of telespheres, in fact, he mentions ‘Disneylands’ as ex-

VOCABULARY

Imagineer
a person who devises and implements a new or highly imaginative concept or technology, in particular one who devises the attractions in Walt Disney theme parks

anticipatory design
a method where it’s up to the designer to simplify processes as much as possible for users, minimizing difficulty by making decisions on their behalf

yensis soil
soil from the Matanuska-Susitna Borough of south-central Alaska, notable for the amount of glacial silt in its composition

UPLOADS



Fiction Set in
Seward’s Success

Vivian Faith Prescott
FOX FIRE

Nathan Shafer
RAVENADE & A FEW NOTES
CONCERNING ALASKAN
DEATH METAL

POINTS OF INTEREST

Imagineering

The term ‘*imagineering*’ is a portmanteau of ‘*imagination*’ and ‘*engineering*’. There is a slight amount of controversy over the origin of the term. The Walt Disney Company owns the copyright to it, but they did not coin the term. It had been in use since at least 1940, with the Alcoa Company in the advertisement below.

Futurist illustrator Arthur C. Radebaugh used the term to describe his work, particularly his “Black Light Magic” using fluorescent paint under black light.



amples of them. The Disneyfication of Buckminster Fuller’s work, the willing integration the global media ecology, as well as the science and science fiction of the future, is what built EPCOT. Tomorrowland is a shining example of the way we think of the future and its technologies because it has been able to saturate the global media ecology for so long. It is one of the death knells of transhumanism because it has taken the philosophical optimism of its thinkers and co-opted them as **Imagineers**. As a point of contention, Imagineering, that whimsical mixture of imagination and engineering, is a mantle taken on by transhumanists like Timothy Leary, who identified himself with that profession, though more in the vein of co-opting rather than colluding with the Disneyfiction of the speculative imagination. Perhaps this is part of the reason cyberpunk literature was able to secure such a large section of the science fiction audience, it’s future was not a neutered utopia full to the brim with exciting possibilities, it offered something real, and tangibly different. It is a vision of the future that was not a world of Fuller’s **anticipatory design**, but a world where that anticipation manifested, and then obsolesced. A literary problem solved by Doctorow’s ‘ad-hocracies’ and exacerbated by literary punk.

There is no way to know how Arctic City, Seward’s Success or even Denali City would have fared, in a world where Disney theme parks could have taken those same ideas and turned them into speculative entertainments, or even if Disney would have gotten into the game and transformed one of them into an EPCOT Alaska. Imagineering, for all of its wondrous possibilities is a colonialist appropriation of the mystery of the future, one that should be treated with skepticism. The locus of Seward’s Success, in the Matanuska-Susitna Borough is ground zero here. The Matanuska Valley is originally home to the Dena’ina Athabascan people, who still live there, the influx of white America to the region was because of the Matanuska Colony, a program of the New Deal, where Scandinavian-American farmers from places like Minnesota were transplanted to establish a farming culture in an effort to waylay the Great Depression’s stranglehold on progress.

The Mat-Su Valley was actually a perfect fit for Alaska to establish an agricultural enterprise—thousands of years of glaciation in the region created a rich **yensis soil**, which could be exploited to grow several different crops in the endless sunlight of the summer months. Onions, cabbage and broccoli from the Mat-Su Valley are nearing legendary status, and for several decades in the late twentieth century, the Matanuska Maid Dairy flourished in Alaska. The last two decades have seen an explosion in population in Southcentral Alaska (the Anchorage Bowl, Kenai Peninsula and Mat-Su Valley). This explosion has been fueled by the ethnic diversity

railroad workers, who were bringing in people from all over the world. The Government Hill neighborhood (where the air tram to Seward’s Success was proposed) is one of the most ethnically diverse neighborhoods in the United States, along with adjacent Mountain View, Fairview, Muldoon and Wonder Park, as per the 2010 Census.



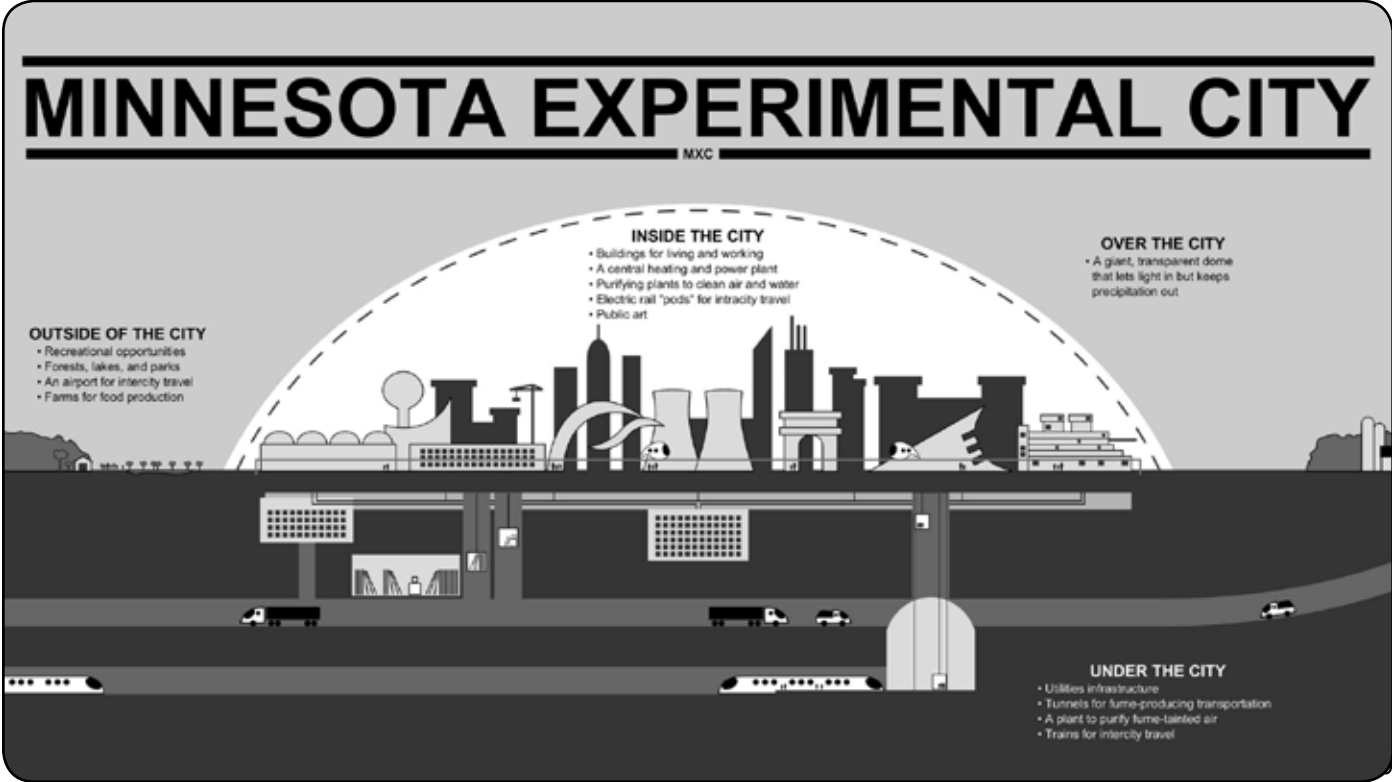
Extra: MINNESOTA EXPERIMENTAL CITY

- 1. **DID YOU KNOW** The Denali City archive makes mention of Athelstan Spilhaus’s design for an experimental domed city in Minnesota?
- 2. **OR THAT** Spilhaus was also known for his *Our New Age*, sunday comic strip in newspapers popularizing science of the future?

ATHELSTAN SPILHAUS’S DOMED CITY

Like the Minnesotans who eventually populated the Matanuska-Susitna Borough, where Seward’s Success was proposed, there was a plan for a domed city in Minnesota.

The Minnesota Experimental City (MEC), was the brainchild of Athelstan Spilhaus, a scientist and dean of the University of Minnesota.



2 Multiple Players

Mike Gravel in Conversation with Nathan Shafer

NS Denali City was proposed as a ‘leisure town of the north’, not a domed city, could you speak a little bit to the politics of that?

MG Let me explain how the dome got carried away. Part of the environmental community, which was very much opposed to the Alaska Pipeline, were upset that I had succeeded in getting the pipeline approved.

During that same period, I felt that the problem with Alaska is that we do not capitalize on our ‘winter wonderland’. Most of the investments in tourism and hotels have a hard time getting financing all year long, because there is going to be a decline in business in the wintertime. I was trying to analyze, “what we could do in the wintertime?” Well, one is, we have the natural beauty that exists. It exists in the summertime and it also exists in the wintertime. It’s awesome in the wintertime. The problem is that it is cold. So I reasoned, “what is the biggest attraction in Alaska?” The fjords of southeast Alaska I think are secondary. I believe our biggest attraction was Mt. McKinley, or Denali. I took several helicopter rides around the mountain settling on a parcel of ground that was on state ground. It wasn’t on federal ground—you got to get a little distance from Denali to see the massive nature of the mountain. Pat Pourchot was my lands man when I was in the senate. We wanted to figure out a place that would have nice, natural skiing. The problem with skiing in the wintertime is, of course, that it is so goddamned cold, and it gets even worse when you get up to Denali. When you go into the interior it gets a lot colder than it does on a coastal area.

This was the time of Munich and also Montreal.

tect Frei Otto covered portions of the town in Teflon drapes, which he had done previously at Expo 67 in Montreal, which is also where Buckminster Fuller built the Montreal Biosphere for the US Pavilion.)

Now both in Munich and in Montreal, they had large Teflon-sheltered areas. On a trip to Europe I met the people who designed it. What he designed in the way of Teflon, I thought that it was just dynamite. Looking at the area, we could probably cover 100 acres, maybe even more, depending on the engineering involved. But once you cover it, you can control the environment. We are not going to grow palm trees inside, but you would have manageable cold weather, under this, 160 acres or more. There would also be chalets, and a downtown area that would be built, and tie it in with the slopes. So that is what I had a vision of.

I started talking about the fact that this was important to do, and I had a rapid transit system at the time, mag lev, and everyone thought I was as crazy as a loon, of course, China has thousands of miles of mag lev trains right now. You could move people from Anchorage to this location in less than an hour, on a straight shot. So now, you got the transit system to get you there, you got enough coverings engineered and

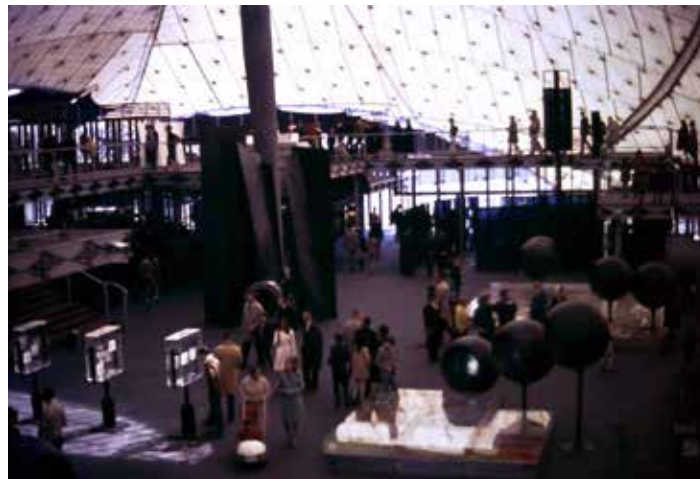


Fig. 42: Lower Site for Denali City as seen from the Tokositna Glacier. The Tokositna River can be seen in the foreground and Peter’s Hills (the Upper Site for Denali City) can be seen in the background. (**Opposite page, Fig. 41:** Frei Otto, Montreal Dome.)

the communities built inside of them. Of course there are just so many details to work out, but I leave that up to the engineers. Mine is just a concept approach to it.

This would make Alaska a destination place in the winter. What would flow from that would be the economic activity in Fairbanks, Anchorage and in Southeast. Once you got an anchor like that, the tour boats will be coming in. People will make ways to get there. So that’s the whole concept of it, to make the economy of Alaska stronger by capitalizing on the winter wonderland aspect of Alaska. We called it Denali City.

What happened was there was a reporter at the Anchorage Daily News at the time; he was a preservationist, you know, he wanted to go back into the cave with a loincloth on. What he did is he tagged it early on, that Gravel wants to build a dome over Mt. McKinley. I really had a lot of opposition from parts of the environmental community, because keep in mind—I

was very strong on the nuclear power side of the environmental community. That is the reason I was never attacked outside. It was from within Alaska. The dome over Mt. McKinley stuck like a piece of gum to my biography. There’s nothing I have been able to do. When people ask me about it, I say that it is completely ridiculous. Don’t you think it is ridiculous, are you going to put a dome over McKinley? But that is not what people latch onto. It gives it a little bit of flavor. Since I was very much of a problem: as a maverick, a revolutionary, or whatever you want to call it. It was easy to assume, well Gravel is crazy. They thought I was crazy in the way that I got the Alaska Pipeline passed, but I won. And some of the craziest stuff I was for, they washed.

And now, what you are doing. I was very excited when I realized what was going to be involved. Because yours is the best chance I have of the getting the gum peeled off of my biography. Ha-ha.

(The 1972 Munich Winter Games is where archi-

NS Well good, so to follow up with that, we are actually using a new technology called augmented reality to build Denali City, in a virtual environment, and then we are going to use smart devices and the Internet to locate it on the Tokositna. So people, if they have a smart phone and an Internet connection, are going to be able to go there and see a virtual version of the city.

MG Oh my god. This is fantastic! Pat Pourchot is the one that knows the precise location. About ten to twenty years ago, the Interior Department commissioned a study of where would be the most likely location to put a facility to capitalize on the mountain. The location in that study, cost beaucoup money, and it was exactly the spot where Pat and I had located Denali City. I don't know where you have located it, but Pat can get out a map and show you exactly where it is.

NS One of the reasons I reached out to you was because of that. I have been to your archive, the Gravel Archive in Fairbanks, and I went through the whole Denali City section of it, several times, and I haven't found images, like artists interpretations of the city—

MG We didn't have it. We didn't have the capability at the time. You see, where I used the money, is I was using helicopters from the National Guard, to take interested people to it, so beyond that, God, I sketched it out. I'm not an artist, so there are no scaled images. And that's of course what you could do now, that would just make this a reality. Because one of the problems you have, when you have a vision, and it is not shared broadly. People can't call into the vision, but once you get images of it, out there, they can call into the vision. So you will make a big a contribution to the concept as I did with the originality. You got to take from concept and vision to reality, and I think that is what you are telling me that you would be able to do. That is going to be valuable for the state's economic future, particularly so with the decline of oil. In fact, I made speech after speech, that one day the oil is going to

be someday gone. What is not going to be gone is the beauty of Alaska. Alaska can sell its beauty and still have it.

NS So, we are building the city now, and we would like to have input on what you envisioned parts of it to look like.

MG Well, we gave a lot of time at the time: the skiing, ice skating; a portion of the city would be covered by a tent—and the tent, it is not like a triangle tent. What you could do is play with this idea, turn around on the sides, like when you go into a grocery store and you look at the meat lockers. How the meat in the lockers is frozen. What they do is they have a shot of air that goes straight up from the casing and that mitigates the loss of cold weather into the department store. Although when you walk down that isle you can feel that it is colder. We were playing around with that technology, just conceptually. So the edges of the tarp, just one big tarp stretched, and stretched at an angle to comport to the terrain.

NS I want to follow through on this, the more I have heard you speak, it is an important sort of pivot to put onto the history of Denali City, especially, seeing as how Alaska is tending to move away from megaprojects, in larger and larger senses, but they are going to be the only way certain things get done—

MG This is a megaproject! You may be able to get some major investments, see if the city or the state were to buy into this. I would be prepared to speak to the legislature, to promote this, and to get major tourists, like the Holland American Line. They wouldn't be able to go up there in the wintertime; but this would expand their capital investment in Alaska. Since they are making investments big time, by taking the vessels up there. This is going to increase because with the craziness around the world, there is not that much of a likelihood that jihad is going to be visiting Alaska, or particularly Denali City. So these tourists would be more prone to go to Alaska if we had something to offer them. I will give you an example. You know the riverboats that ply the Rhine River? Up and down. We know the people. We have been on it a couple times.

And what did they do? They build these vessels that are only good in the summertime. So now what do they do? They sell Christmas packages, to have Christmas in Germany in these wonderful old Christmas towns. They use the boats in the wintertime because apparently the water doesn't freeze up. They had a boat and they were advertising it maybe 8-9 months, now they can advertise it almost year round. Talk about improving the quality of life that one enjoys.

NS Denali City was in connection to the capital city move too, correct?

MG No, I stayed away from the capital city move, which was so acrimonious at the time, particularly when you are running statewide. You are always for keeping it in Juneau. But that's a canard, because it should be in Anchorage. But here too, they never made the proper investments with the money they had, oh they did a lot of good things I guess. I don't fault them for that. But Alaska should be number one in education and it is not. Of course we had the money to be number one. But that is the way it goes. It's a little conservative, the leadership there. But here too, if you had a modicum of state financing, this is something the permanent fund could invest in. No question about that, and the permanent fund could use its power to bring in other big investors.

I can't tell you how we got battered with this, but how we could really visualize it in our minds. I have lived long enough to see somebody do this. As you say, if we can get the videos and the vision and put the image up the way this thing would be designed, and we need some engineering help, that is where we were stymied, too much by the seat of the pants.



Fig. 43



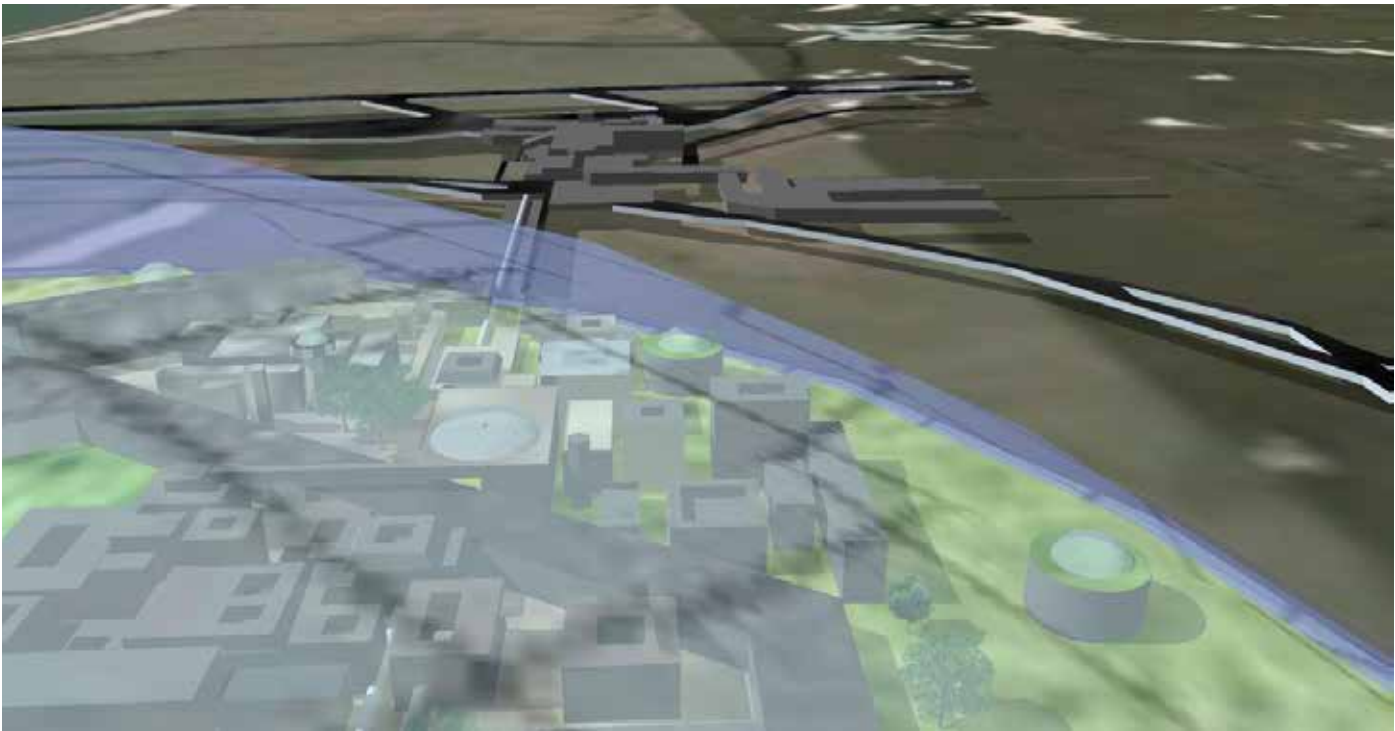
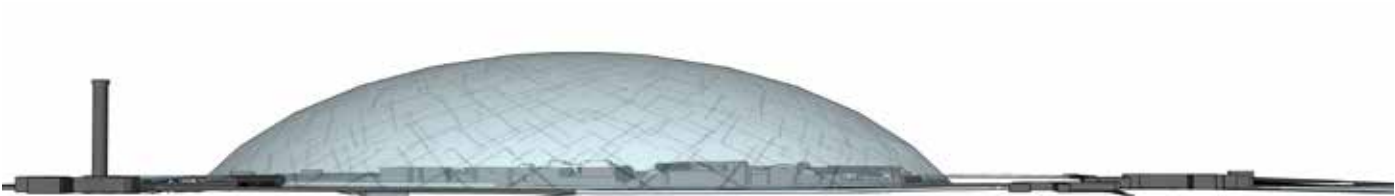
Fig. 44

Fig. 43 & 44: Nathan Shafer, "Transhuman Tourists at the Institute of Human Understanding, Denali City" and "View of Denali from the Institute of Human Understanding"

Arctic City

Coordinates:	66°54'46.0"N 162°28'42.3"W
Founded:	1972
Designed by:	Frei Otto, Ewald Bubner, Kenzō Tange
Notable Features:	Dome, Farmland, Nuclear Generator, Air Gondola
Landmarks:	Coast (Meant to be built on waterways)
Recreations:	Fishing, Hunting, Fruit Co-op
Climate:	European Temperate
Borough:	Northwest Arctic
Named for:	Climate of circumpolar north
Population:	50,000
Other Names:	City in the Arctic, Arctic Town

This Page, Fig.1: Arctic City Skyline;
Fig. 2: Arctic City from the air
gondola,
Opposite Page, Fig. 3: View of the urban
area from atop of the dome;
Fig. 4: Map of Arctic City outside of
Kotzebue.



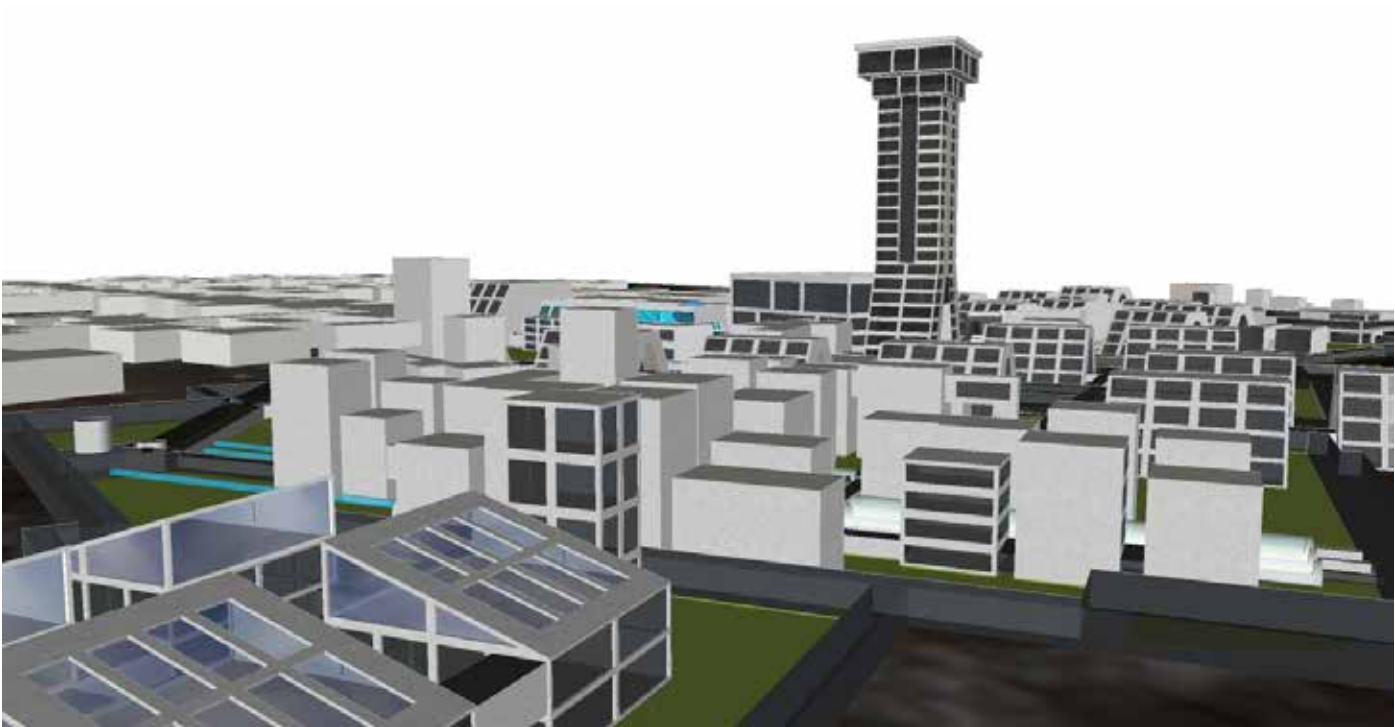
Seward's Success

Original Place Name: Dihli Tunch'del'usht Beydegh (Dena'ina)
Coordinates: 61°22'30"N 149°54'45"W
Founded: 1968
Designed by: Tandy Industries of Oklahoma
Notable Features: Air Gondola, Indoor Moving Sidewalks
Landmarks: Anchorage, Knik Arm
Recreations: Dog Mushing, Cross-Country Skiing
Climate: Indoor
Borough: Matanuska-Susitna
Named for: Seward's Folly
Population: 20,000
Nickname: "The Twenty-First Century City"



This Page, Fig.1: Seward's Success Skyline; **Fig. 2:** View of the Alaska Petroleum Center from a glass covered walkway in the Performing Arts Complex;

Opposite Page, Fig. 3: Seward's Success from Knik Middle School, **Fig. 4:** Map of Seward's Success on the Original Site Plan, Phase one is articulated, Phases 2, 3 and 4 are in beige and would have been built in phases.



Denali City

Original Place Name: Ch'etl'uch'ghilyasht (Dena'ina)
Coordinates: 66°53'46.1"N 162°30'03.3"W
Founded: 1976
Concept Design: Senator Mike Gravel
Notable Features: Teflon drape structures above city, Mag Lev Trains, Dirigible Platz
Landmarks: Denali, Tokositna Glacier
Recreations: Skiing, Ice Skating, Mountain Climbing, Sailing (Ice and Water)
Climate: Controlled Microclimates
Borough: Matanuska-Susitna
Named for: Denali (mountain)
Population: < 2,000
Nickname: "Leisure Town of the North"

This Page, Fig.1: Denali City Skyline; **Fig. 2:** View of Teflon Tents from a hotel rooftop.
Opposite Page, Fig. 3: North end of Denali City from Tokositna Glacier; **Fig. 4:** Map of Denali City.

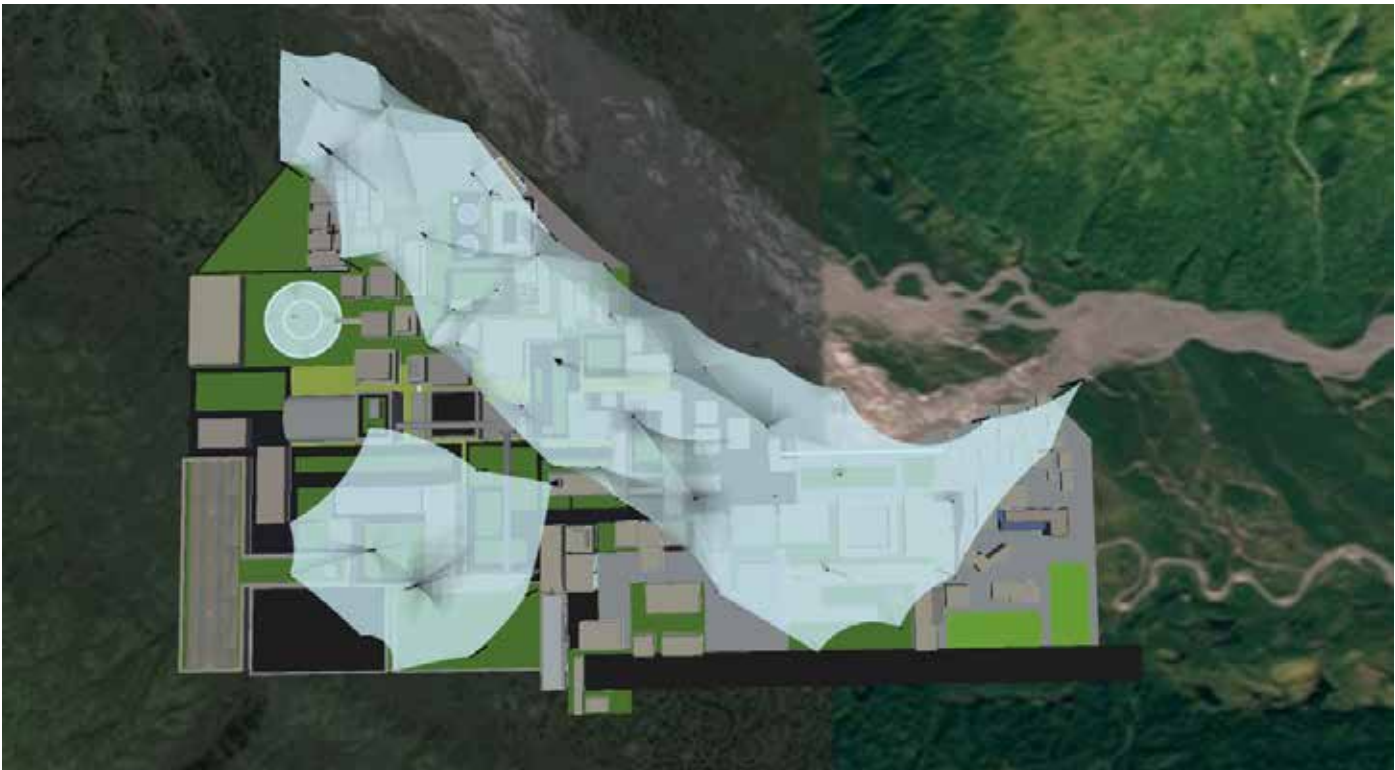
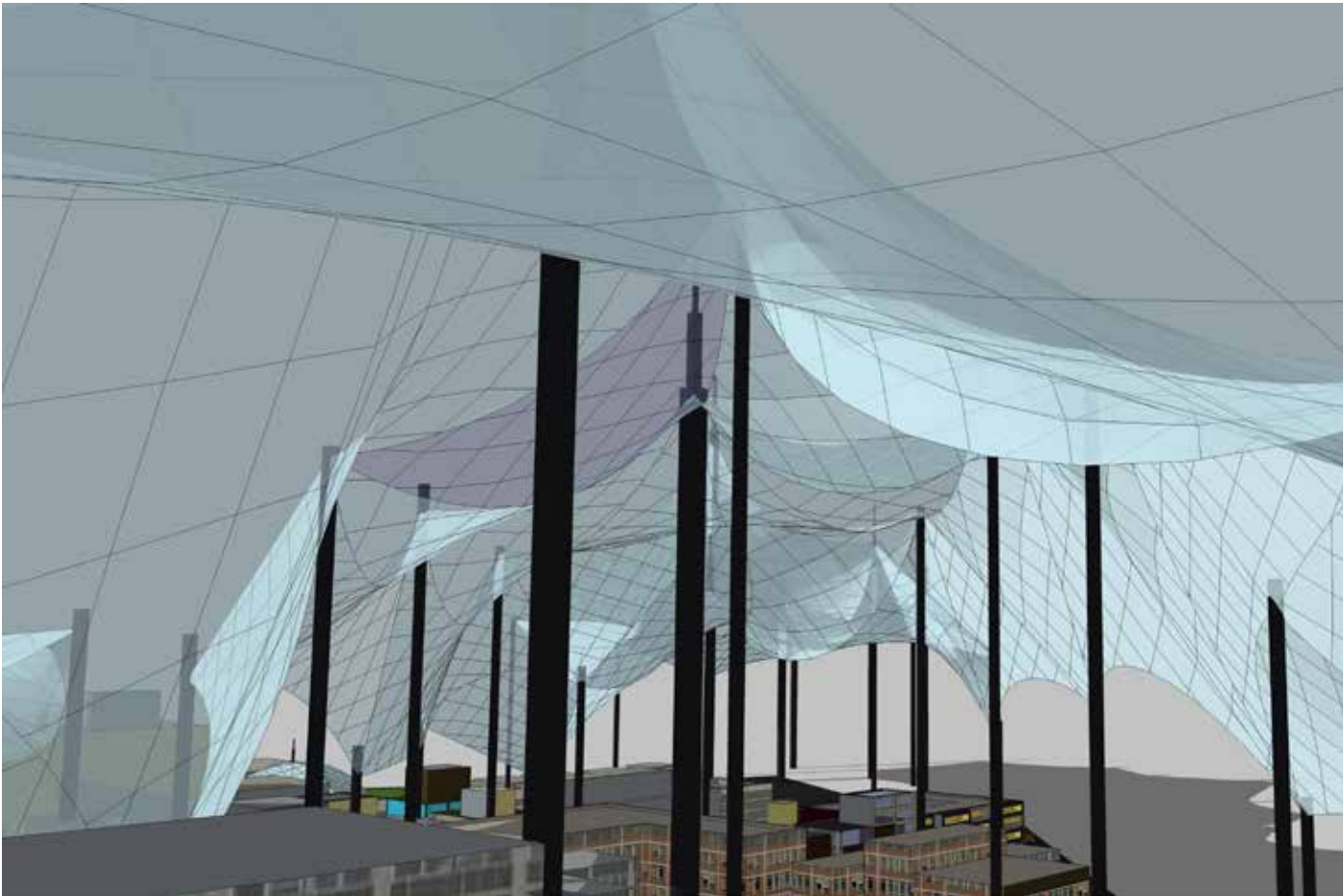
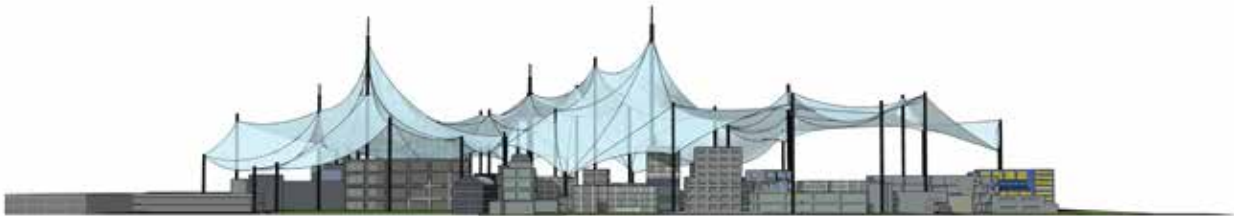


Fig. 1



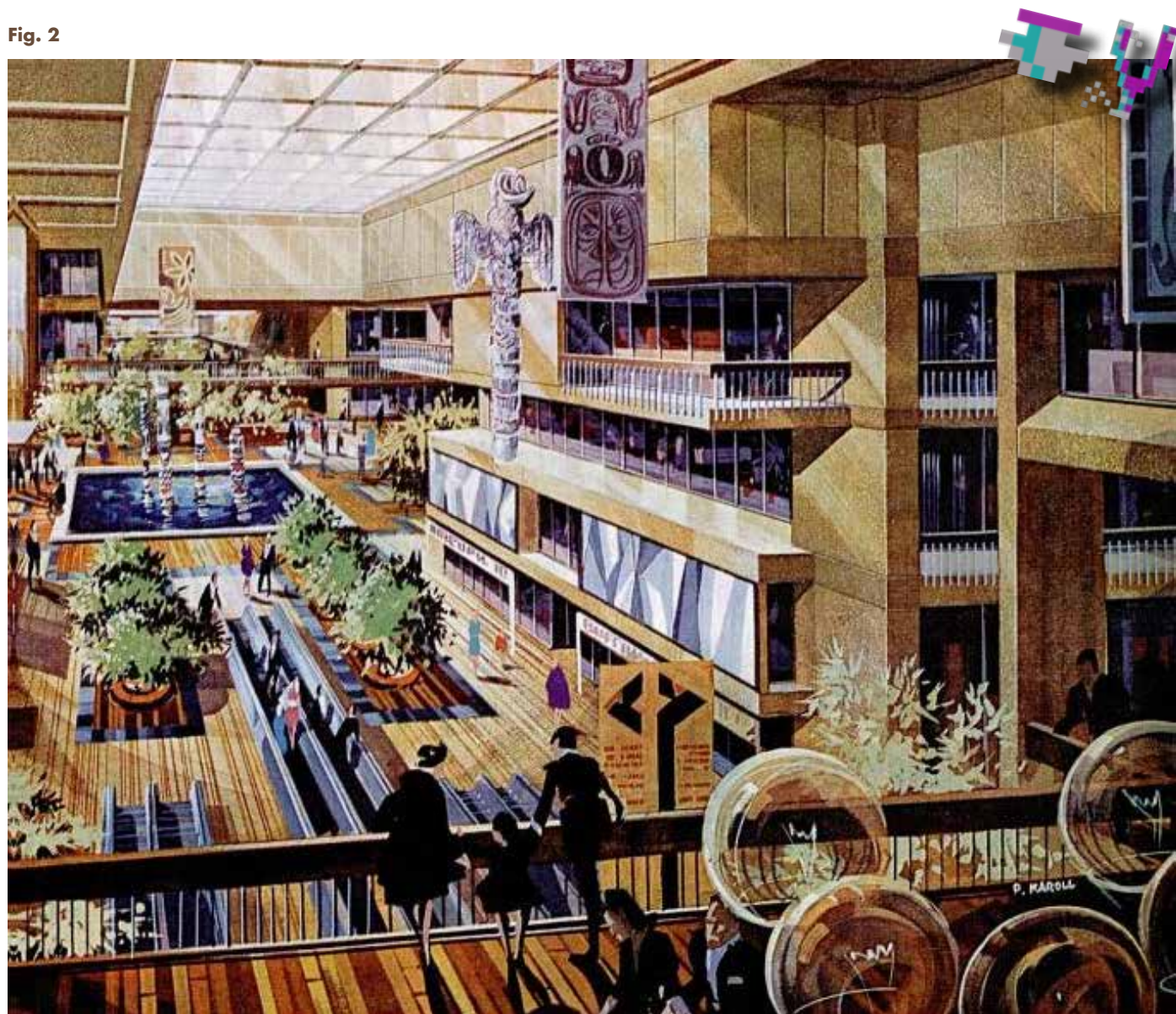
Public Art with Benjamin Schleifman

Reconsidering the Public Art of Seward's Success 50 years later

It has been fifty years since the original proposal for Seward's Success was presented to the Anchorage Chamber of Commerce. Back in 1968, the blatant and naked appropriation of Alaska Native imagery and art forms was regarded as part of the general aesthetic of the Pacific Northwest. This level of colonial thinking and cultural appropriation has a long tradition in art.

In the 60s and 70s, many works of art made for public consumption incorporated imagery and crests from Tlingit, Haida and Tsimshian cultures without regard for cultural context or owner-

Fig. 2



ship. It was part of a circumpolar kitsch. Seward's Success was no exception. In fact, it did one better. The image on the bottom left is part of the original proposal for Seward's Success. A closer look at the public art in the image shows floating totem poles, totem poles hovering above a fountain and various formline images suspended from the ceiling.

The noted Tlingit artist Benjamin Scheliefman was asked to go over this image before we recreated any of the proposed public art. He found several instances of family crests and clan imagery that should never be used without permission or at all outside of the correct cultural context. Rather than go ahead and recreate the public art exactly as it was for historical accuracy, we asked Benjamin Schleifman to design new public art pieces in their place. Augments on this spread reflect the new public art in Seward's Success.



Fig. 3

Opposite Page, Fig. 1: Benjamin Schleifman, Public Art Piece;
Fig. 2: Artist's conception of the interior of Seward's Success

This Page, Fig.3 & 4: Benjamin Schleifman, Public Art Piece

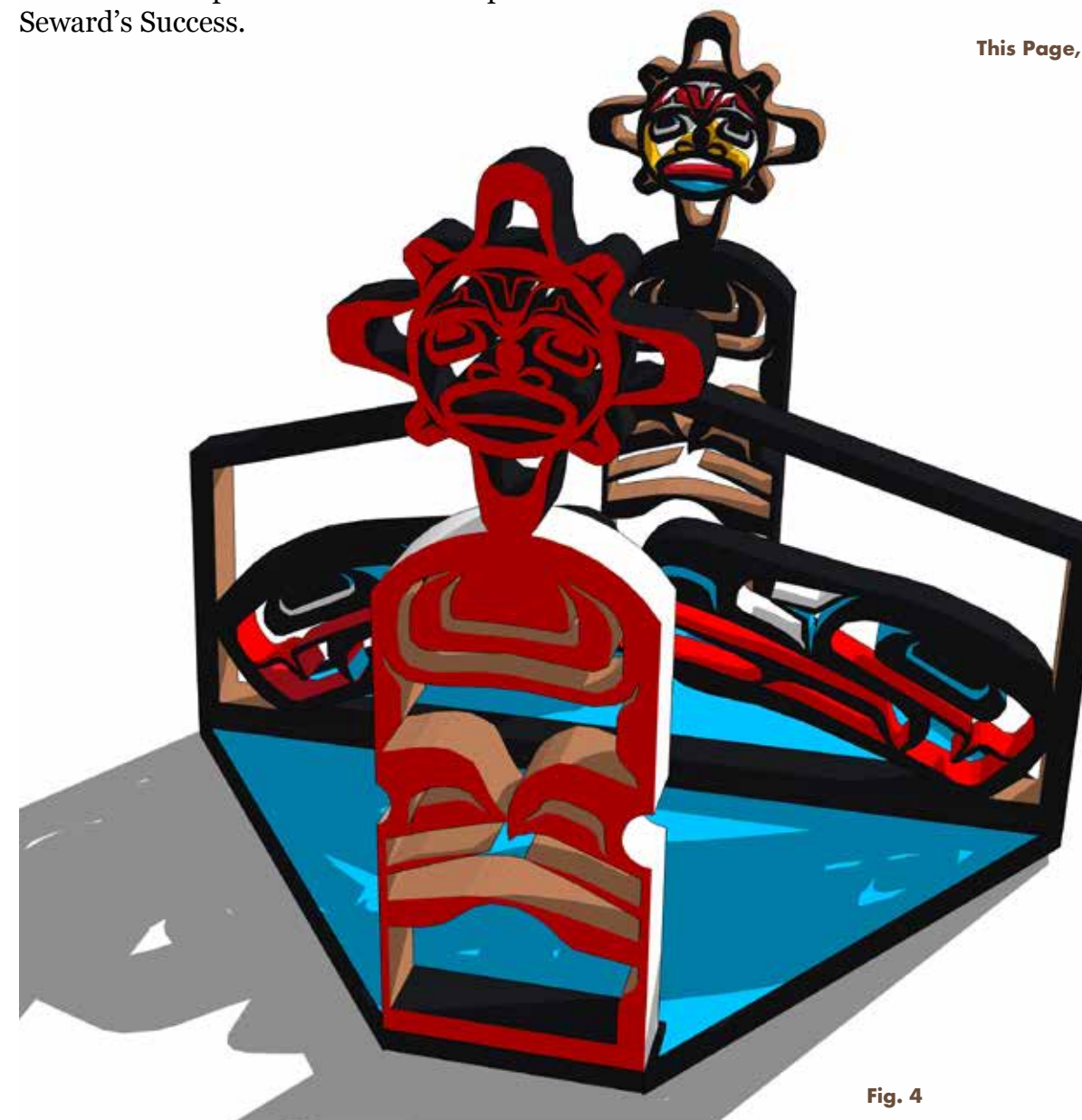


Fig. 4

SECTION

3

Glossary

anthropological science fiction: the study of media as environments (Neil Postman, 1970).

anticipatory design: a method where it’s up to the designer to simplify processes as much as possible for users, minimizing difficulty by making decisions on their behalf.

arcology: a concept in which the ideal city is a massive vertical structure, which preserves more of the natural environment, a concept combining architecture and ecology as envisioned by Paolo Soleri.

bernal spheres: a type of space habitat intended as a long-term home for permanent residents, first proposed in 1929 by JD Bernal.

cyberpunk: science fiction featuring extensive human interaction with supercomputers and a punk ambiance.

eschatology: any system of doctrines concerning last, or final, matters, as death, the Judgment, the future state, etc.

extropy: the pseudoscientific principle that life will expand indefinitely and in an orderly, progressive way throughout the entire universe by the means of human intelligence and technology.

Glacia: an ancient, underground, domed city found in the comic book Nelvana of the Northern Lights.

hygge: a quality of cosiness and comfortable conviviality that engenders a feeling of contentment or well-being (regarded as a defining characteristic of Danish culture).

Imagineer:
a person who devises and implements a new or highly imaginative concept or technology, in particular one who devises the attractions in Walt Disney theme parks.

mag lev: magnetic levitation used in transportation.

media ecology: the study of media as environments (Neil Postman, 1970).

megaproject: a very large, expensive, or ambitious business project.

mobiliias: mobile transhuman replacements for cities.

monoculture: a culture dominated by a single element : a prevailing culture marked by homogeneity.

optimism one: FM 2030’s proposed term for the ‘Space Age’.

panspermia: the scientific theory that all life on Earth came to it via a meteorite containing DNA, thus making all life on Earth extraterrestrial in origin.

processed realities: mediated ontologies experienced by users of technology, measuring evolving brain power.

raygun gothic: a catchall term for a visual style that incorporates various aspects of the Googie, Streamline Moderne and Art Deco architectural styles when applied to retrofuturistic science fiction environments.

semiotic ghosts: bits of deep cultural imagery that have split off and taken on a life of their own.

steampunk: a subgenre of science fiction and fantasy featuring advanced machines and other technology based on steam power of the 19th century and taking place in a recognizable historical period or a fantasy world.

telespheres: virtual nodes connecting the world to itself.

transhumanism: a philosophy that explores human transcendence above or beyond organic, corporeal limitations through technological and philosophical evolution.

umiak: an open Inuit boat made of a wooden frame covered with hide.

Unilang: a universal language to be used by all people in the future (English proposed to be renamed Unilang).

up-wingers: an alternative philosophy to the normative left versus right political duality to be progress versus regression.

vitrification: the act of vitrifying, to convert or be converted into glass; in cryonics, bringing tissues to cryogenic temperatures without freezing or cellular damage.

yensis soil: soil from the Matanuska-Susitna Borough of south-central Alaska, notable for the amount of glacial silt in its composition.



This Page: Seward’s Success
Opposite: Arctic Adventure Sculpture Park from Above

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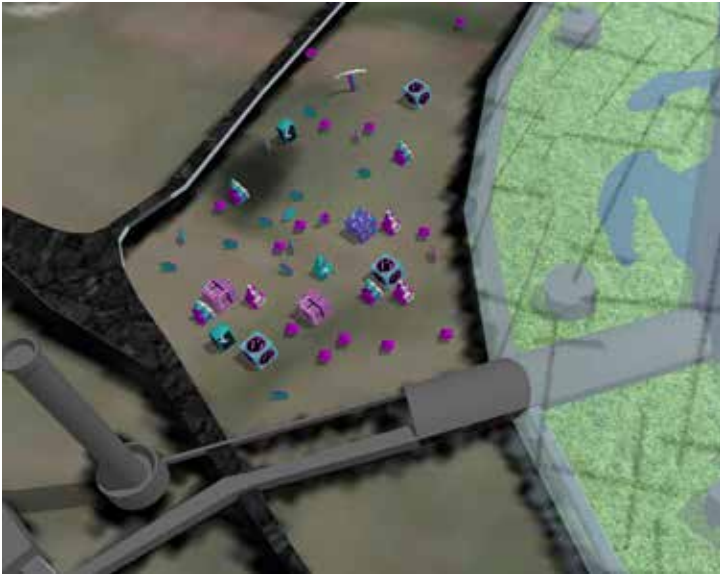
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Other Volumes in this Series:



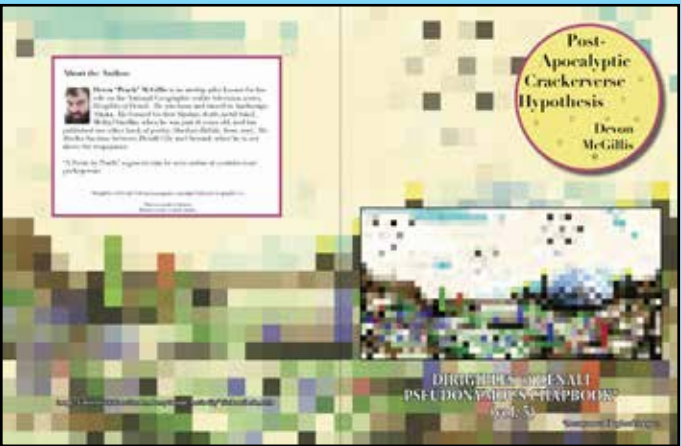
Volume 2: The Science Fiction Omnibus A collection of science fiction written specifically for *Dirigibles of Denali*, imagining an alternate reality Alaska, where the ‘domed’ cities had been constructed.



Volume 3: Gravel Proposes McKinley Bubble Collected and transcribed excerpts from the Denali City Section of the *Mike Gravel Papers* presented as a found poetry anthology.



Volume 4: Seward's Success A digital reconstruction of the original proposal for the city of Seward's Success as it was presented to the Anchorage Chamber of Commerce.



Volume 5: Post-Apocalyptic Crackerverse Hypothesis A collection of poetry written by Devon “Peach” McGillis, the fictional airship captain of the Koliak on the *Dirigibles of Denali* reality television show.

Opposite Page:
Top: Mengloth Inc., Cheechako Wizard Suicide Runners, 1994

Below: Mengloth Inc., Cheechako Wizard Werewolf Musers, 2002

