

"Designing the Airstream: The Cultural History of Compact Space, ca. 1920 to the 1960s"

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"DESIGNING THE AIRSTREAM: THE CULTURAL HISTORY OF COMPACT SPACE, CA. 1920 TO THE 1960S"

INTRO

Since 1931, with more than 80 years of war, social, and political changes, there is an industry that began with less than 50 manufacturers, swelled within seven years to more than 400, only to have one company from that time period remain: the Airstream¹. To make this even more astounding: the original design never changed.

How can this be? One would think that the consumer would tire of the same design year after year and demand something else. Isn't that what we were taught with Planned Obsolescence, or *the policy of planning or designing a product with a limited useful life, so it will become obsolete?* There seems to be something special about the design that has stood the test of time.

There may be a way to design that can transcend the changes of time and reach that iconic status. Good design is not merely a subjective decision. There is a scientific approach that can be replicated in any design, with the same desired results, that make it a good design.

When researching the subject of compact space, and specifically, the design of the space within the Airstream and with the recreational travel industry in mind, there was a very limited amount of resources in which to gather information. This encouraged me to seek out more data about the design of the compact space, considering the demand today of a well designed space or product.

¹ Don Reasons, "Airstream History," *Silver Wheels*(blog), <http://www.calldon.com/air/htnm>

Two factors seem to determine the space itself: The first is availability. When space is at a premium, whether because of population density or limited square footage, space seems to be utilized to its fullest. According to Michael Freeman, author and an authority on Asian design and art, Japan would seem to be the leader for this category, being that they have a limited amount of real estate and a significant population². The second factor that will influence the design of the space is economic. Although this may actually be determined by the first category (wealthy clients may still live in large spaces in Japan although the majority may not), the budget tends to determine *what one needs versus wants*.

This begs the big question “What do we really need?” If one can answer this question thoughtfully, and truthfully, then the design process may go easier than expected due to fewer demands. Although the subject of need is immense, and many factors/parameters can be applied to change the outcomes, I chose to focus only on what is needed/desired from the client for design in the travel industry. This was determined with two more factors: what do we really *need* for survival; and what do we *want*, for comfort. The answer tends to point to what was happening in the housing/construction industry as well as- the recreational travel industry, had direct influence for the design of the client/traveler. The comedy “The Long, Long Trailer” with Lucille Ball and Desi Arnaz³ gives a good indication of what these industries were doing by the 1950’s.

What was being designed by the housing industry directly translated via kitchen design and materials, bathroom design and materials, and the design and incorporation of outdoor appliances. What was once considered a luxury has become the standard, whether at home or away (hotels included).

When studying the recreational travel industry, more specifically, the recreational vehicles and campers, I was drawn to the Airstream. This unit is iconic with the American landscape and has always been an industry leader. This company also allowed for a major continuing factor in

² Michael Freeman, *Space: Japanese Design Solutions for Compact Living*, (Universe Publishing, 2004)

³ Clinton Twiss, “*The Long, Long Trailer*,” VHS, <http://www.imdb.com/title/tt0047191>

providing efficient comparison and compilation of the data being researched -- the design. Since its inception in 1931, Airstream has been designed with an exterior aluminum shell that is riveted together. This remains a constant in an ever-changing industry-- the Airstream shell has stayed the same. The shell set the Airstream apart from their competitors, and lets the interior change to reflect the passage of time and the current desires of the consumers.

Comparing Airstream design over the last 80 years allowed me to examine three factors: the travel industry and how change of designs throughout the decades related to the changes in the housing industry and in consumer sentiment; the use of the available space, or creation of more space, due to the demands of the traveler stemming from more expected conveniences from the housing industry; and finally, the design changes today that are reflected by exterior forces (fuel prices/emissions, vehicle/technology design changes, and consumer trends) show that efficient use of space is back to a premium, while allowing for expected conveniences now considered standard. All of these encourage the creation of designs that maximize the use of the space. In other words, they are the visualization of the data being compiled for the design.

BACKGROUND

Where did it all begin? Before the travel industry came about, one has to look back in history discover how travel was conducted. For our purposes, we can start with the early 19th century.

Modern examples include Mongolians with their yurts⁴, the American Indians with their tipis⁵(teepees), and the Romani gypsies with their covered wagons, or *vardos*⁶. I will focus more on the latter topic, due to the fact these vehicles are the only ones on wheels and most closely follow my topic. Even the legendary pilgrimages of the past that many religious followers would take could be covered in this category, with the traveler living along the road, only for a temporary period of time but creating an entire society of moving individuals with a common purpose⁷.

Now we forward to the 19th century and enter the period of Romanticism, which evolved after the French and American revolutions, and in which society shifted away from the traditional social institutions and toward individual rights. The focus was now on originality, artistry, and enlightenment. Europe was becoming more urbanized, and its citizens felt more free to travel just for the enjoyment of it⁸. According to Isaac Newton, “the physical world was orderly, regular and logical. Nature was subject to laws with mathematical certainty.”⁹ Nature was becoming more important as more than just a supply of materials for us to use. The romantic individual wanted to use nature for his health, and well-being (physical and mental).

⁴ Becky Kemery, “Yurtstory: the history of yurts ancient and modern,” *Yurts, Living in the Round*, 2012

⁵ David and Charlotte Yue, *The Tipi*, (New York: Alfred A. Knopf, 1984)

⁶ Thomas Allen Acton, *Gypsies: Surviving Peoples*, (MacDonald Educational, 1981)

⁷ Jean Darby and Wallace Cleft, *The Archetype of Pilgrimage: Outer Action with Inner Meaning*, (The Paulist Press, 1996)

⁸ Steven Kreis, “*The History Guide: The Romantic Era*,” Last modified Aug 04, 2009

⁹ Ibid

What *is* romanticism? Oxford Dictionary refers to it as: *an adjective inclined toward or suggestive of the feeling of excitement and mystery associated with love*. There may be many opinions about what is defined as romantic, but a majority seem to associate it with Nature, or a natural place that evokes a sense of being. Some examples of places may include Morocco, Tahiti, or Hawaii. Nowadays we may also include things originating from man as being romantic, even though romanticism was a response to the Industrial Revolution. A couple of examples may be the Aztec ruins or the Eiffel Tower. How many marriages and romances began on top of that iconic radio tower, which was actually the antithesis of the romantic period?

All of the intellects and artists of this period helped renew our affinity with nature, as being an important part of our daily lives. With the cities and industries beginning to swell, the natural setting, or even a small garden would become that much more important. The topic of the garden is very extensive, so I will focus on a more current time period that influenced us with what we have today: *the Parks Movement of the 18th and 19th centuries*, more specifically, in America and Europe.

The English enjoy entire countrysides that many gardens of today try to replicate, with Sissinghurst Castle Garden in Kent being most popular. The county of Kent itself is known as *The garden of England* and at the castle, the most famous of the gardens is the White Garden. Many other gardens have themes such as: outdoor rooms; biomes with distinctive environments- like a rainforest; floral labyrinths; an apothecary, or medicinal garden; or even a poison garden.¹⁰

As the Industrial Revolution went into full swing by the 1830's, the conditions of many of the industrial towns declined.¹¹ They were over-crowded and began to fall into decay. The parks were becoming increasingly appreciated for their civic purpose: area for leisure time; social place for the lower class to interact, and improve oneself; encouragement of music, sports and recreation, horticulture; and even an extension to a museum or gallery. With so many benefits, land became increasingly important to designate as a park within the more populated areas of a

¹⁰ National Trust UK, "*Famous English Gardens*," Last modified 2014

¹¹ Harriet Jordan, "Garden History," *Public Parks*, 22, no.1, (1994): pp 85-113

town. These parks became known as the ‘lungs’ of the city.¹² This, along with the famous authors of this period, such as Thoreau, Catlin, and Emerson, would not only inspire Americans to find a greater meaning to life through nature, but also influence Congress to designate land for what would be the future of the National Park System.

Now that Americans could have a place in which to enjoy nature, and reap the benefits of being *in* nature, one must get there.

In the US, the majority of travelers began on foot and horse, whether it be for land in which to make a homestead, or the promise of gold in the far west. The use of the covered wagon, or Conestoga wagon, helped facilitate this transition, as they endured lengthy, and dangerous trips, and began what may we may know now as the RV, or recreational vehicle(although there was nothing recreational about the wagon at this time.)

Although it is believed that the Conestoga wagon is the name for *all* covered wagons, that is not the case. The Conestoga refers specifically to a heavier-timbered wagon that was designed for hauling heavy loads(up to six tons) and was predominantly used in the nearby states of Ohio, Virginia, and Maryland. The wagons typically used for the westward migration later on were known as ‘prairie schooners’ or ‘Western wagons,’ which were lower, had flat bodies, and the white canvas which made them look like the sailing ships to which they were referred to.¹³

The roots of the Conestoga wagon can be traced back to the region of the Conestoga river area of Lancaster, Pennsylvania. It is believed that the name “Conestoga” comes from the Iroquois language meaning; *the people of the cabin pole* referring to the Native American tribes that lived along the Susquehanna river.¹⁴ The German Mennonite settlers that built these wagons lived in this area, hence the name now for the wagon.

¹² Ibid

¹³ History.com staff, “Conestoga Wagon,” History.com, 2010

¹⁴ Ibid

The Conestoga wagon could possibly be the first *form follows function* design in the modern sense of that phrase. The shape of the wagon was based on the utility of what it carried and how it was used. The design was handcrafted from wood, with the floor curved upward at each end--to keep the contents from falling out; gates on each end that would drop, yet still be held with a chain(tailgate); and the shape of the canvas--being smaller at the base, then tapering upward and outward--to facilitate use, storage, and standing in the center. The opening was just big enough for the driver to sit on the board at the front end. The inside use shaped the outside form.

As one traveled along the long and dusty trails, the need for rest and camp would become a daily ritual. How one did this would be determined on a couple factors: how long was one on the trail, and how much further one had to go or how one was brought up, and what expectations one had as far as civility and refinement out on the trail went--which ultimately would bring in that question: *need* versus *want*?

One example that would fill both need (storage, seating, sleeping) and want (comfort, refinement, luxury) may be seen in the British campaign furniture, or 'knockdown' furniture that was used during the Boer war. As 'life under canvas' went, this furniture was designed to be taken apart and put back together without the means of nails or tools, and make life on the march much like the way at home was¹⁵. Now that sounds like what would be expected of furniture on the trail, yet many of the pieces were the same that one would find in an English manor house, and the British officers who came from the upper class were used to a certain standard of living. As Nicholas Brawer, author of the book *British Campaign Furniture: Elegance Under Canvas* once said, "mobility was much less a concern than keeping up appearances."¹⁶ Although some of the finest furniture makers produced this furniture, it was still made to be used. Not only is it comfortable to sit in and beautiful to look at, it is extremely functional.

Beautiful, functional furniture also found its way into other forms of 'rustic living.' As we draw near the end of the 19th century, another way to take advantage of the benefits of nature,

¹⁵ Anna Rohleder, "Camp Life Comforts," *Forbes Magazine*, Aug 15, 2001

¹⁶ Nicholas Brawer, *British Campaign Furniture: Elegance Under Canvas*, Harry N. Abrams, 2001

with a little less travel while still maintaining the standard of living that one was accustomed to, would be the addition of the Great Camps of the Adirondack's. These compounds were established by the country's elite: The Vanderbilt's, The Rockefeller's, and The Durant's, and although made of rough-beam construction, these compounds were grand and opulent inside.

Robert Durant was the son of Thomas C. Durant, the vice-president of the Union Pacific Railroad. Thomas, who was then working on the first Transcontinental Railroad, wanted Robert to help him develop the Adirondack's for tourism.¹⁷ Robert was interested on how the Japanese would take a building and incorporate it into the landscape. The buildings were separate, not only for solitude, but also to contain the spread of fire. They were attached to each other by covered walkways. He was also influenced by the Swiss Chalet, with its decorative fret work, its low hanging yet wide eaves of roofline, and not only its vertical, but also its horizontal log work.¹⁸ Some of these buildings were magnificent, in scale and construction, and required a small army of artisans to keep them maintained. From cutting firewood for all of the fireplaces on the site (some compounds had as many as 27 buildings) to replacing rotten logs or chinking that had fallen out, these camps were expensive to own and maintain, which is why only the nation's elite were able to enjoy this way of living. In all, this is an interesting contradiction, and beginning, of 'roughing it' in nature yet with all of the refineries of home. Today, we may call it '*glamping*' or glamour camping.

The spread of the lavish, grand camps followed the railroads and their barons (of the time), to the Grand Lodges that were being built. In visiting our National Parks, the wish (by the railroad barons and wealthy tourists) was to stay in one of the hotels, or lodges, because of the proximity of the railroad to the parks. One could almost say that the barons had a monopoly to the entrances to the parks, but in order to entice the traveler to venture to these remote lands, they required the necessary capital to build these opulent buildings to draw the customers.

¹⁷ Alfred A. Donaldson, *A History of the Adirondack's*, (New York: Century, 1921)

¹⁸ PBS staff, "Adirondack Great Camps," *THE ADIRONDACKS*, PBS.org, Web, 2008

The Forestry Building at the Lewis Clark Exposition in Portland, Oregon in 1905, which was said to be the largest log building at the time¹⁹, helped influence the grand lobby of the Glacier Park Lodge in Montana, which was near the entrance to Yellowstone National Park²⁰. The lodge was owned by the Glacier Park Company, which happened to be a subsidiary of the Great Northern Railway.

As rail and passenger travel grew, so did the desire to venture into nature on one's own. The development of the automobile helped give the freedom to many, not only to travel *as* they wished, but also *when* they wished. G.B. Shaw's *Man and Super Man*(1903) includes the first reference to the automobile, and its adventurous long distance race, as well as a scene in a gypsy encampment.²¹

Another literary classic that (would now) includes the automobile is Kenneth Grahame's *The Wind in the Willows*(1913). This tale of animals begins with the vardos, or Romani gypsy covered wagon, to be replaced with the automobile, and eventually near the end of the story with the introduction of the bi-plane.²² The story began as a tale told to the author's only son, who later took his own life at the young age of 20. His father wrote it as a way of grieving; of recounting the stories with no thought, at first, of having it published. It is now considered a literary classic, and was later adapted in the 1950's by Disney, in a movie called *Mr. Toad's Adventures*, which is still widely available today.

Although it is one thing to want to go out into nature and enjoy its wonder, it is another thing to actually be able to survive in the wildness. Some basic tools of survival, such as laying a fire, pitching a camp, creating a makeshift shelter, and hunting for food were somewhat forgotten by the young men who now, in the early 20th century, came from the urban settings. A British Army officer by the name of Robert Baden-Powell saw this need while an officer during the

¹⁹ Portland History.com, "Lewis & Clark Exposition," Last modified Dec 06, 2008

²⁰ PBS staff, "Great Lodges of the National Parks," *GREAT LODGES*, PBS.org, Web, 2008

²¹ Bernard Shaw, *Man and Super Man*, (Cambridge, Mass.: The University Press, 1903)

²² Kenneth Grahame, *The Wind in the Willows*, (New York: Charles Scribner's Sons, 1913)

Boer War, and wrote a small handbook called the *Aids to Scouting*(1899) (ironically, this is the very same war that helped make campaign furniture so popular.) This recognized need ultimately led to the birth of the Boy Scouts.

The Boy Scout movement began in 1908 in England, and eventually made its way to the United States in 1909. A publisher from Chicago, William Boyce, had traveled to London for work and became lost in the infamous fog. A young boy scout offered to guide him to his destination, and refused to take a tip for his efforts, stating that a Scout does not take payment for a good deed. This intrigued Boyce, and inspired him to create the Boy Scouts of America, as well as organizing several youth organizations such as: the Woodcraft Indians and the Sons of Daniel Boone.²³ Soon after the Girl Scouts of America were formed in the year 1912 by Juliette Gordon Low.

With the desire to enjoy the natural setting, due to the arts and literature of the time, the new found skills of survival, due to the popularity of the Boy Scouts and Girl Scouts, and the availability to get there on one's own, due to the popularity, and affordability of Ford's Model A, the middle class was now ready to 'get back to nature.'

This desire not only stemmed from the outside influences, as mentioned earlier, but also from the large demographic shift during the Industrial Revolution from the country, or agriculture setting to the urban center. In many places, populations doubled, and although the cities used to need a 'flush' of new people now and then, due to poor sanitation conditions and disease (TB), they no longer needed this--thanks to improved sanitation--and now had to deal with the overcrowding conditions that were becoming the norm.²⁴

For most of the children growing up at the end of the 19th century, better health and medicinal opportunities were available, with the fight against tuberculosis being the most prominent. Thomas Mann's *The Magic Mountain*²⁵, is a novel about a student who visits a

²³ Boy Scouts of America, *The History of Scouting*, Last modified 2009

²⁴ Dr. Herman Obdeijn, *History of International Migration*, Leiden University, Last modified, Oct. 1995

²⁵ Thomas Mann, *The Magic Mountain*, S. Fischer Verlag, 1924

cousin in a tubercular sanatorium in the Swiss Alps and ends up staying for more than seven years, after himself being diagnosed with the disease. Tuberculosis was then a health condition in almost every household, and may be one of the more ‘unspoken’ reasons for the exodus to the suburbs later on.

As a result of that large shift to the urban setting, the poor environmental conditions that one lived with on a daily basis now in the city, the yearning for the beauty of the natural setting, and the labor movement fighting for shortened work weeks and vacation days, the middle class went back out into the country *en masse*.

Even after the 1st World War (1914-1918) society wanted to return to nature, especially after losing many Americans in Europe. Americans were tired of international problems and wanted to turn their attention to home, and to themselves. During the war they had lived with restrictions set by the government such as: the railroad and travel; shipping; and production. As industries were no longer making war supplies, they now began to make consumer goods. The two most important things that improved American lives during this time were the automobile and the radio. Americans now had wages that were higher than ever before, and they wanted to enjoy life.²⁶

As Americans began to ‘hit the road’ they found it quite the opposite of what they were used to. Cars needed roads in good repair, and when one left the city, all that was out there was dirt. President Woodrow Wilson was an advocate of good roads and made that his party platform in 1916. He stated: *the happiness, comfort and prosperity of rural life (again, benefits of living in the country,) and the development of the city, are alike conserved by the construction of public highways. We, therefore, favor national aid in the construction of post roads and roads for military purposes.*²⁷ The Federal Aid Road Act of 1916 was enacted on July 11 and was the first federal highway funding system of the United States. This was applauded by many, such as the farmers that needed to get their produce to market, the many that benefited by the Rural Free

²⁶ Learning English-The Classroom Articles, *America Turns Inward After World War I*, Last modified, Feb 2011

²⁷ Richard F. Weingroff, *Federal Aid Road Act of 1916: Building the Foundation*, (Wash. D.C.:1916)

Delivery (RFD) service, and of course, the traveler now in the automobile. Unfortunately, the commitments of World War I, which ended in November of 1918, prohibited the proper implementation of the Act and it expired in 1921.

After the war, several new acts were implemented to include, not only a grid of ‘primary highways’, but also the New York Parkway system, a numbering system to designate important roads, and eventually interconnected ‘super-highways.’ Not only was this good for the daily traveler, but also a part of a larger defense network system. The largest development of the transportation system in America will not happen until the return of the GI’s after World War II, with the backing of President Eisenhower and the Federal Aid Highway Act of 1956.²⁸

As the automobile began to spread (itself) across the American landscape, and the common Sunday afternoon drive in the country began to turn into extended trips, the demand for more places in which the weary traveler can rest grew. Most of the hotels were located in the city centers, and when one would travel on a dusty road all day, exposed to the elements, most travelers would be reluctant to check into the hotel. There also was little place to park the automobile, which led to the need, and to the birth, of the Auto Camp.

The Auto Camps were small areas of land, located on the outskirts of town yet usually at, or near, important or busy intersections of the growing interstates, with the basic necessities specific to the automobile traveler.²⁹ Their occupants later became known as ‘Tin Can Tourists.’ Not only could travelers pull right up next to their site or cabin, but the camps boasted amenities such as running water, natural gas lighting, showers and rest rooms (usually common ones), shelters or garages (for the automobile), outdoor furnaces, picnic grounds, and needed supplies such as gas, oil, or refreshments.³⁰

²⁸ History.com, staff, “The Interstate Highway System-Facts & Summary,” *History.com*, 2010

²⁹ Beth O’Shea, *A Long Way from Boston*, Madison, WI, Whittlesey House, McGraw-Hill book Co. 1940

³⁰ Stephan Mark, “Save the Auto Camps!”, *Southern Oregon Heritage*, 1998



(http://img0.etsystatic.com/009/0/5574001/il_570xN.413837760_sdsy.jpg)

At first, local towns welcomed these Tin Can Tourists, and their money to spend on vacation, yet problems also arose from these little regulated roving societies. A poem by Ruth Raymond gives a look into the lifestyle on the automobile trail.

*Neith the spreading oak and pine tree tall, "A tin can tourist" in the Fall.
Puts up his tent and plans to stay, In Florida till blooming May,
And soon another tourist comes, they meet and greet like old time chums,
They tell new jokes and make new plans And mess from out of the same tin cans.
Then other tourists come along, The camp force now is growing strong
Cars from the North, the East, the West, Bring weary tourists seeking rest,
All happy in this flower glade Beneath the broad oaks welcome shade
they're singing songs and making plans And pile up the empty cans
And ere the blooming May comes round they'll buy a piece of fertile ground
And mark it off in streets and squares And every tourist take some shares,
For they will build a city here When they come back another year*

*Just as the "tin can tourist" plans When he piles up the empty cans.*³¹

Although there were issues, as with any growing industry, grow it did. Even during the depression, it was profitable to offer amenities to the weary traveler. At first the amenities only included a camping spot, with tent sales peaking in 1924³², then it was cabins, some with kitchenettes and a small store to purchase groceries, then by 1935, the amenities began to include ‘trailer houses’ which allowed the automobile traveler to carry a small cabin of their own to the camp site.³³

Unfortunately, as competition increased, and more newer facilities began catering to the business traveler, the older auto camps were left to the working class. The image was further tarnished when an article by J. Edgar Hoover came out labeling: *the majority of auto camps as havens for fugitives, prostitutes, and drug addicts.*³⁴ Eventually, the camps gave way to a growing industry of the ‘motor courts’ which later where called ‘motels.’ These allowed the traveler to pull up to their room, enjoy many standard amenities, and even capture the essence and flair of the area with themes of local lore. As time progressed, the sight of the ‘giant teepee’ would give way to the multi-story Holiday Inn.

With the ability to travel freely--*the automobile*, the means to travel--*wage improvements and time off*, the destination to travel to--*nature*, and now the roads in which to get there, what did one bring? This is a question that has been answered time and time again for the weary traveler, yet the answer always seems to be different considering who the traveler is, where they come from, and where they are going.

An example given earlier was the campaign furniture, yet that was reserved for only the few who could afford to have those pieces made for their travels, and travel they did. For every traveler, the basic needs must be met: shelter, warmth, rest, and nourishment.

³¹ Old Florida postcards.com, Last modified 2009

³² Stephan Mark, “Save the Auto Camps!, *Southern Oregon Heritage*, 1998

³³ Ibid

³⁴ J. Edgar Hoover, “Camps of Crime,” *American Magazine*, Feb. 1940, pp.14-15,130-132

Shelter ran the gamut from a canvas rucksack that one would carry on their back and lie under the stars, to a grand lodge or chalet with a staff of servants. Warmth could be a simple camp fire or a roaring stone fireplace. Rest included a simple wool blanket or a four-post bed with silk linens. Nourishment was something found, or hunted, on the trail to a seven-course meal prepared by a private chef. Not only was everything subjective to being a necessity, for some, just the travel alone was a new-found luxury. This is where a little help, from either the seasoned traveler, or an Association, would help with the list of basic necessities.

A brochure from the 1930's, written by the Oregon State Motor Association, gives the idea of what was expected by traveler, and proprietor, alike. According to the Association, this was a list of "Do's" and Don't's" for the vacationing motorist distributed in 1930.

The primary rule for all motorists, tourists or otherwise, is to observe safety precautions. Drive sanely. Go slow on curves and on blind hills to keep to the right. Avoid night driving, if possible. Don't try to make miles--enjoy your trip. Start early in the morning and turn in early. This saves nerves and assures you of better accommodations.

Equipment? A small cooking outfit in a light container, if you favor auto camps. Roll your bedding in a waterproof, dust proof "tarp" or oil skin. Tuck a large thermos bottle in your war bag if you trip is through desert country. Next to the thermos bottle put a first-aid kit. Practical kits may be had for little cost. Take no perishable food as most auto camps have a store nearby. Don't forget the auto robe (I believe this is a wool blanket that may have started from the use on a sleigh). Field glasses, if you have them. Fishing tackle may be rented if you are going to a national park.

A minimum of clothing is wisest. For women, one good traveling suit --wool knit preferred-- and a wash dress or dark silk for very warm days. Medium weight traveling coat, comfortable shoes, serviceable gloves and simple accessories complete her outfit.

Don't carry the family bankroll in cash or currency. Buy traveler's checks in tens or twenties. They are accepted everywhere. Leave your jewelry at home or in the bank. It's harder to lose in either of the latter places than on the highway.

Don't overlook that vitally important item--your car's health. Give it the benefit of the doubt by having its ignition, lubrication system, brakes, lights, tires and other important parts inspected before you leave. On the road watch your gas, oil and grease carefully.

If you tire of auto camps, clean, comfortable hotels will be found in virtually every town.³⁵

This is where and when the Airstream began its life and the recreational travel trailer industry really took off. As travelers took to the road more and more, they not only wanted to bring some of the comforts of home, but they also wanted less work to do when they got to the destination. The cabins at the Auto Camps were comfortable, but one needed to either rent, or bring linens. By being able to bring one's own trailer, with all of the comforts of home already inside, that was considered a real luxury.

³⁵ D.L.Ewing, "Grants Pass Bulletin," *Chronicling America*, 2011

THE AIRSTREAM: DESIGN AND DEVELOPMENT

The development of the Airstream trailer was actually the work of two people: Hawley Bowlus and Wally Byam, although it was Byam that had the vision to make Airstream what it is today.

Hawley Bowlus was the chief designer of Charles Lindbergh's plane, *The Spirit of Saint Louis*, and had his own design for a travel trailer known as the *Clipper*. His company was struggling, and he enlisted the help of a man who had designed a simple teardrop trailer kit that was sold in the back of Popular Science magazine--Wally Byam. Byam acquired the company, and designs, from Bowlus and reintroduced it as the *Airstream Clipper*, signifying the aerodynamic shape, and changing the door from the front to the side, thus reducing the wind drag and improving fuel efficiency.³⁶ As they say now, "an icon was born."



(<http://sierranevadaairstreams.org/memories/history/peewee/family/wally/gallery2.html>)

The design of the airstream is a reminiscent of the covered wagon, or *vardos* that Byam traveled in with his grandfather. He took the utilitarian design and the functionality of the wagon and the utilization of technology (aluminum from airplanes) and merged them together. He

³⁶ Bryan Burkhart, and David Hunt, *Airstream: The History of the Land Yacht*, Chronicle Books, 2001

created a teardrop shaped shelter, added a stove and chest for ice, and made it easy to tow, due to the lightweight materials. His timing couldn't have been any better.

The First World war had ended, and optimism was high. Electric lighting, radio, airplanes, the automobile, not mention new appliances such as: the toaster (1921), air conditioner (1924), improved washing machines, and the refrigerator (1927) were all available. It was exciting, and promising, and technology was the reason, and the future was at hand.

Steamship travel had just reached its peak, with first class luxury, and the mark of status for those traveling on them, marked our conquest of the seas. The Zephyr Streamliner bullet train-- designed in stainless steel and utilizing the latest diesel technology to improve speed, efficiency, and appearance, captured America with its amazing *Dawn-to-Dusk* run from Denver to Chicago at record speeds, demonstrated our conquest of the land and rails³⁷. Finally, the Douglas DC-3 showcased the height of luxury in the sky. Not only did the plane have plush seating for day flight, but they converted into sleeping berths, similar to those on the Zephyr, which accommodated overnight passengers and helped make them comfortable and reliable, and air and train travel profitable³⁸.

Contemporary with this was also Buckminster Fuller with his *Dymaxion* or geodesic designs of the future;³⁹ and the Chrysler Airflow, which was a streamlined design and the first to be designed with the use a wind tunnel.⁴⁰ All of these designs not only influenced society, but also became objects of desire. Then came Airstream; it was the perfect, affordable solution for the middle class seeking to enjoy recreational travel.

The history of the Airstream is interesting enough, and it's shape and design completely original, yet that wasn't enough to launch it into the realm of being an icon. That was done by the masterful marketing of the creator, Wally Byam. Not only did he sell the American

³⁷ The Burlington Zephyr, *Streamliners: America's Lost Trains*, PBS.org

³⁸ Boeing, *Boeing History: DC-3 Commercial Transport*, accessed July 2014

³⁹ Encyclopedia Britannica Online, "R.Buckminster Fuller," accessed July 05, 2014

⁴⁰ Chrysler, *Airflow Club of America*, Last modified 2012

mainstream a trailer, but he sold them a *lifestyle* in which to live in that trailer. That promised lifestyle, never mind if it really happened, helped change the social expectations of what camping was, or could, be in America. The design was the future, looking forward towards progress and overcoming immense odds. It was filled with hope.

This resonated with the American middle class after World War I and the Depression. Everyone just wanted to breathe and relax and enjoy freedom from everyday work life. Later came World War II and production was halted for the Airstream, and for many other normal business routines. When the war was over, the recreational travel industry bounced back with a fervor. America was elated with the fact that not only was the war over, but it was over decisively, and we were victorious, with our manufacturing base intact. Even before the film industry was starting to incorporate trailers into some of the current movies, providing the necessary acceptance into mainstream culture.

Some examples that come to mind start begin with *It Happened One Night*(1934), starring Clark Gable and Claudette Colbert, who stay in an Auto Camp while on their way back home to reunite her with her fiancé⁴¹. Next would be Sullivan's Travels(1941), starring Joel McCrea and Veronica Lake, in which a movie director wants to learn about the down-trodden by pretending to be one. He takes to the streets, all the while the studio he works for is following him to make sure he is safe. They utilize a 'land yacht,' or a travel trailer that has all of the comforts of home.⁴² The last example comes full circle, in which the luxuries of the trailer become too much to be advantageous on the road, with a comedy *The Long, Long Trailer*(1953) starring Lucille Ball and Desi Arnaz. It is her (wanting the) dream of a house on wheels, and after their wedding, she and her husband take off on an adventure while she tries to maintain the normalities of life on the road.⁴³ The movie shows the ridiculous side of trying to be a 'home-on-wheels.'

⁴¹ Frank Capra, "It Happened One Night," *MGM Studios*, 1934

⁴² Preston Sturges, "Sullivan's Travels," *Paramount Studios*, 1941

⁴³ Bretaigne Windust, "The Long, Long Trailer," *MGM Studios*, 1953

As sales of the Airstream trailer rose, so did the expectations of its consumer. More appliances were being developed for the home, and convenience and comfort were more important than just surviving out in nature. They saved you time; time that was precious now; time that could be better spent with the family, doing things together. There may have even been a feeling that you couldn't do without these conveniences; now you have to have them.

The first trailers offered what was to be considered the bare essentials: a bed, sink, a table for your cooking stove, and a closet for your clothes. This was also what one would find in the typical Auto Camps and later called 'Cottage Courts.' As previously mentioned, the Cottage Courts, or motels, were known as 'tourist courts', automobile friendly (meaning you could park your car next to your room) began to offer all of the amenities of home. and had a common motif which was organized around a public lawn. They even took on local styles (translation: stereotypes) which one would expect to see in that area. Picture the giant teepees that one could stay in along Route 66, and maybe even be lucky enough to catch a 'rain dance' by the local indians. ⁴⁴

Although this was a nice vacation to take in your new modern trailer, Airstream offered to take you to see the world. Wally Byam created *the caravan*, which had originated back in the 15th century, but was the *idea* that he wanted 'Airstream-ing' to be.

Historically, caravanning is a group of people, traveling together, each typically on a vehicle equipped for living, in a single file line. Byam did not create these just for the sake of selling you a trailer, but to foster the dream of the world to see. This also showed what your new Airstream could allow you to do⁴⁵. The more that one did in their Airstream, the more one wanted to do. There were even times that while on a caravan to Europe, or South America, Byam would find a defect, or flaw in his design, and call back to the factory to have it remedied. Items were also sent that he felt might be superior for use on the Airstream. He was constantly looking to improve on the design through actual use. Although he realized that many average

⁴⁴ NPS, *Wigwam Village Motel 6- Route 66*, accessed July 5, 2014

⁴⁵ Frank Palmer, "Wally Byam-The Man that Started it All," *WBCCI History*, 1962

Americans would not be able to go caravanning, he felt that they still deserved the best. That belief is still held true today at the company. Possibly this is one of the factors that has allowed Airstream to enjoy that lasting, and commanding, presence in the travel industry.

Now that some amenities were widely available and now charged for, due to regulations involving 'tin-can' tourists, things stopped looking like a camp, and more like a home. Motels began offering 'kitchenettes' or a small refrigerator, hot plate, and possibly a sink. These rooms were marketed at a higher price due to the fact that the occupants could prepare their own food instead of paying at the restaurant. Airstream saw this trend and began offering the same. The question that might be asked: "Did the traveller demand the amenities, or did the industry 'spoil' the traveller with the amenities, and then this became the accepted practice? Travelers being lured with 'air-cooled rooms' and 'color television' seemed to be acclimated to this traveling lifestyle, and now demanded the same for family campouts.

Although Airstream has maintained its shape throughout the years, only allowing itself to get longer, and adding space as demands increased, it only added 4 inches in width for most of its existence. Unfortunately, expectations of 'home comforts' (or the traveler being told what they had to have) demanded that the trailer swell, along with its list of 'necessities'. That, now required a larger vehicle in which to pull this 'portable home on wheels.' It's a wonder how these 'trailer queens,' as they became known, made it out of the state; let alone to some of the remote places that they were being heralded as being 'capable of going to.' What was first a recreational camper to be sold as--capable being towed by a bicycle now needed a Dodge Power Wagon just to move it down the street.

So what were these major changes? In studying the design changes in the Airstream, it was easier to plot them with the use of color for various rooms. As the changes happened, the colors would track the differences from year to year. Those changes in color began to show a pattern, not unlike some of the patterns that were evident in some of the contemporary works of art that now were becoming popular. This may be a complete coincidence, but there were some artistic influences on the Airstream that might have been unintentional, but influential none the less. Many of these changes that can be traced back to the Bauhaus movement.

The Bauhaus was a school in Germany that was founded on the premise of art and design being united. Its programs combined architecture, sculpture, and painting into one craft, with the idea that artists and designers could create beautiful objects that were useful. It was founded by architect Walter Gropius, yet also included a power house of intellectuals of the 20th century: printing was taught by artists Paul Klee, Vasily Kandinsky, and Josef Albers; cabinetmaking by Marcel Breuer; textiles by Gunta Stolzl and Anni Albers; metalworking by Marianne Brandt and Laszlo Maholy-Nagy; typography by Maholy-Nagy and Herbert Bayer; and finally architecture by Gropius, then Hannes Meyer, and finally and most notably by Ludwig Mies van de Rohe.⁴⁶

With the increasing political pressure in Germany in the mid 1930's, the school was closed, and many of these key figures emigrated to the United States to teach and influence future generations of designers and architects. Breuer and Albers taught at Yale, Gropius at Harvard, and Moholy-Nagy in Chicago.⁴⁷ Modern design was now born in America.

The modern Bauhaus aesthetic is widely accepted today, yet upon its arrival, it was new; different; exciting yet feared. In John Lienhard,'s book: *Inventing Modern: Growing up with X-rays, Skyscrapers, and Tailfins*(2003) he not only talks of *the speed at which we were discovering the future, but also the recklessness that we were doing it with.*⁴⁸ The youth were embracing the new--in all fields--while the older generation feared the unforeseen path.

When diagramming the Airstream designs in section and plan, using the color scheme for changes, one can almost visualize the influence, and excitement, of the modernist movement: especially from Mondrian, Kandinsky, Delaunay, and even Rothko, to name a few. These artists were noted for looking at 'space' in an entirely different way.

⁴⁶ Winton Griffith, Alexandra, "The Bauhaus, 1919-1933," *In Helibrunn Timeline of Art History, NY: The Metropolitan Museum of Art, 2000*-which also gives credit to built-ins

⁴⁷ Ibid

⁴⁸ John Lienhard, *Inventing Modern: Growing up with X-rays, Skyscrapers, and Tailfins*, Oxford Univ Press, 2003

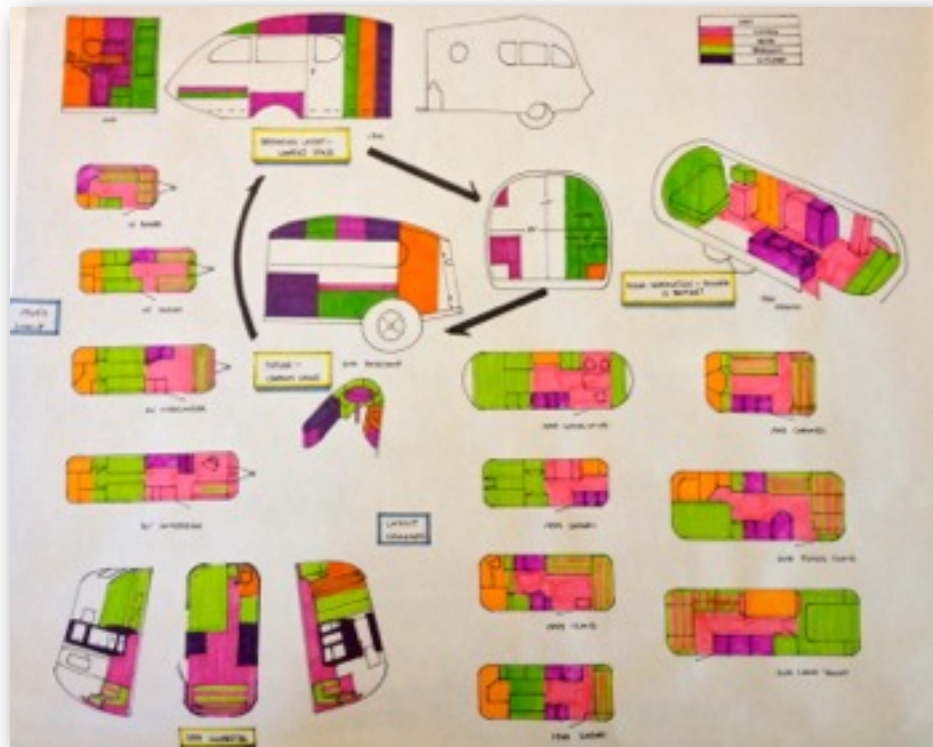


diagram courtesy of Ronald Balas

Mondrian's work was characterized by the pure components of the primary colors, flat, rectangular areas and only straight, horizontal and vertical lines. He believed red, yellow and blue were the only colors, apart from black and white. Yellow was expansive, blue the opposite to yellow – soft and contracting, and red expressed the radiating life, uniting yellow and blue. According to the study of Feng Shui, the colors also mean something according to their use in the living space.

Yellow is believed to increase focus and concentration. It is an excellent color for one's studio or home office. It may not be a coincidence that pencils, legal pads, or even post-it notes are usually yellow. *Blue* encourages efficiency and decision making, releases tension, and promotes tranquillity. A bedroom or living room would certainly benefit from this calming technique. Finally, *red* is associated with energy. It is a visual stimulant that encourages confidence and fearlessness, yet should be used sparingly. Too much will overly excite, and leave one to feel agitated. It is best used sparingly, with a small punch when needed.⁴⁹

⁴⁹ Carrie Cousins, *Color and Emotion: What does each hue mean?*, Tympanus.net, Maxcon, 03 Apr 2012

Mondrian's paintings could simulate a floor plan or city grid, with the colors reflecting the activity in that particular area.⁵⁰

Kandinsky is believed to have had the condition known as “synaesthesia” which allowed him to hear color and see music.⁵¹ This was important due to his study of piano and cello at a very young age, but later was a major influence in his artwork, and he named some of his paintings: *Improvisations, Impressions, and Compositions*.⁵²

In learning to diagram space, I am reminded of not only seeing the space itself, but also the absence of space. I was directed to diagram a score of music from Steve Reich: *Music for 18 Musicians*, for a studio project. Color was utilized to signify the sounds throughout the piece, then spaces were created by transposing the lines to the shapes above. It was a difficult practice, yet very effective to *see* the spaces that one only *heard*. At the end of the project, a completely new space was designed from only an audible source, yet was specifically related to that piece. This is where I really begin to understand data visualization.

⁵⁰ Nicolas Pioch, WebMuseum: Kandinsky, www.ibiblio.org, NP 31, 31 July 2002

⁵¹ Ossian Ward, “The Man Who Heard his Paintbox Hiss,” *The Telegraph*, Np, 10 June 2006

⁵² Nicolas Pioch, WebMuseum: Kandinsky, www.ibiblio.org, Np, 31 July 2002

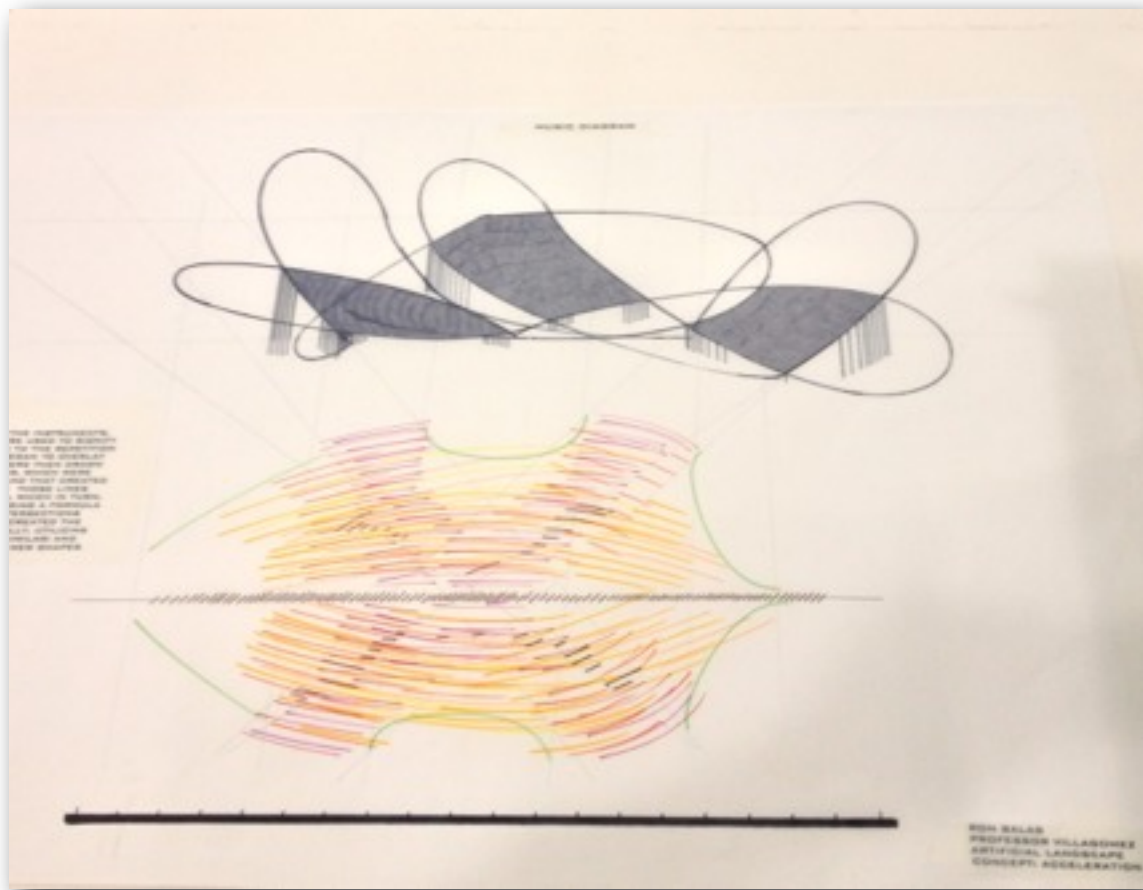


diagram courtesy of Ronald Balas

It was also interesting to find that Kandinsky taught at the Bauhaus school, along with Paul Klee, who not only was a natural draftsman, but also had published his own notebooks that are held in as high a regard as Leonardo da Vinci's *Treatise on Painting*. This demonstrates the influence that architectural elements had on these artists, not to mention the influence the artists had on the architects. Included among these are such Bauhaus legends such as: Gropius; Behrens; Breuer; and Mies. Another influence on Bauhaus ideas would be the *Der Blaue Reiter* group (The Blue Rider) which pursued expressionism and primitivism in their paintings. Kandinsky was a founder of this group and later would have Delaunay join.

Delaunay was influenced by the research into color of the 19th century chemist Chevreul who concluded that: *two adjacent colors, when seen by the eye, will appear dissimilar as*

possible.⁵³ Delaunay's *Homage to Bleriot*(1914) for example, has lots of activity, energetic brushstrokes, large geometric shapes, and use of bright colors against a dark background. Solid objects aren't completely defined, but the areas surrounding them are filled with the colors. Highlighting the negative space can *create* the space itself. If that isn't enough, how about creating a space *within* the color? Paul Klee was to influence another artist that would later come onto the art scene in NY; an artist named of Mark Rothko.

Rothko was known for the creation of space within the color. Due to anxiety of the general social climate going on in the 40's (Depression, War...) Rothko began to remove all elements or imagery from his works, and abstraction took command. He went so far as to remove titles, except for the color, or a number, and was once quoted as saying *Silence is so accurate*.⁵⁴ This was also due to what some of the critics had written about his work. Now, although to buy one of his paintings require millions of dollars, he was not so lucky at the start of his career. Then, he seemed conflicted, as a person, and that may also be reflected in his work.

I admit that I am moved by these paintings, especially the darker and latter ones. When viewing one of these large canvases, after some time, one can start to see the painting 'pulse.' Now I'm sure that it's just my heartbeat in the vessels in my eyes creating such a phenomenon, yet it still is quite compelling to see one of these paintings come to life and to experience that effect. I think the dark, contrasting colors, the 'pulsing' effect, and the blurred edges of the basic shapes, all merge in a painting with a 'sense of living' trapped inside, waiting to be discovered.

Rothko created a Chapel in Houston, which was designed specifically for the reflection and contemplation of his paintings. This Chapel is comparable in importance to Matisse's *Chapel of the Rosary* in Venice, France or to Le Corbusier's *Chapelle Notre Dame du Haut* in Ronchamp, France. With Le Corbusier being the only architect in this group, the Chapel shows the power and influence of a design, by a painter, within a building, in which provides a compelling experience for the participant.

⁵³ Michel-Eugene Chevreul, *De la loi du contraste simultane des couleurs*, 1839

⁵⁴ Anna C. Chave, *Mark Rothko: Subjects in Abstraction*, Yale University Press, 1989

How does all of this translate into the use of space? It is more of an observation or experience of the space, yet one cannot help but think about your personal relation to *space* when looking at the design changes of the Airstream. Was the art at the time a reflection of society, relating to space, and it then was reflected this in plan? Works by Mondrian and Calder could be considered the closest to a representation of a floor plan. They both considered looking at space differently--open space and living space. With all of this concentration, and experimentation in the diagramming of space, how could the designers of Airstream not pick up on it?

As America took to the roads, in search of new horizons, expectations, along with everything else, grew. Cars grew in which to haul bigger families. Families grew, which needed bigger homes. Homes grew, which needed more things inside them and more space around them, which is indicative of the heightened or vertical space. Trailers grew to reflect the new home. Everything grew to reflect America's taste. America needed more space.

Post World War II Americans fled the cities to the wide, open spaces of the suburbs. The green grass and the white picket fence. The promise. The Dream. At least this is what they were told, and sold, as it was similar to the caravan lifestyle. What was delivered was a little different. What they got was Levittown.

Levittown was affordable, postwar housing for the returning GIs. The houses were based on the up-to-the-minute assembly-line techniques used in the automobile industry, and applied to the basics of cookie-cutter construction. They were sold as a 'do-it-yourself-as-you-go' kind of home. Add on as you move up the corporate ladder. They were sold as the new American lifestyle; unlike how most GIs grew up in apartments multi-stories tall, in blocks all around the city.⁵⁵ Unfortunately, this became a new way to live 'on top of one another.'

⁵⁵ Peter Bacon Hales, *Levittown: Documents of an Ideal American Suburb. Outside the Gates: Cultural Landscapes from the Material to the Virtual*, Edited by Art Hist Dept, Chicago University, diagram courtesy of Ronald Balas



(<http://graphics8.nytimes.com/images/2007/10/12/nyregion/12levittown.CA01.jpg>)

Ironically, this must have been somewhat comforting to homeowners, because when they started moving up that ladder, and began taking vacations, they went camping. This was the traveling lifestyle that Airstream and Byam had promised, and which now looked a little different, and eerily familiar. The camping in nature turned out to look like the suburban neighborhood.

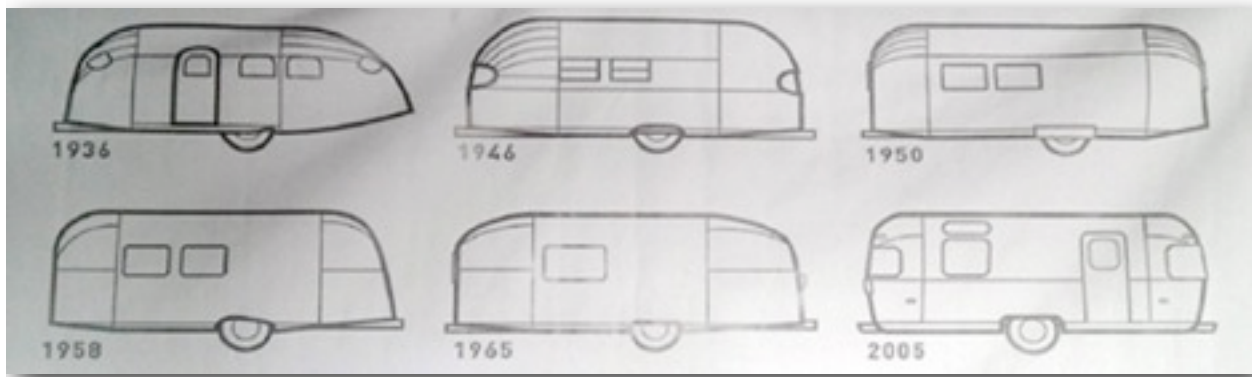
diagram courtesy of Ronald Balas



(<http://sumoflam.biz/airstreamweb/rally-field-2-small.jpg>)

Was this just our nature? I am sure there are books that delve into such questions, which I will not cover for now, but for whatever reason we chose, we picked a lifestyle that seems to be part of our genetic predisposition. No wonder we wanted all of the comforts of home...

diagram courtesy of Ronald Balas



(<http://hofarc.com/hofmann-airstreams/wp-content/uploads/airstream-evolution-info.jpg>)

To find out exactly what we took with us into nature, I will examine the basic years of the Airstream floor plans to show the ‘growth’ of the industry. From 1936 to 1965, Airstream only added 4 inches to its width, but it grew in length-exponentially. Joanne Lee, a blogger who researched the airstream evolution,⁵⁶ feels that as more Americans traveled by train, going from one city center, to another, yet limiting those options once they got there--due to the location of the station, they wanted more. The Interstate Highway system offered more individual freedom. Not having to stick to strict routes anymore, they could travel as they wished.

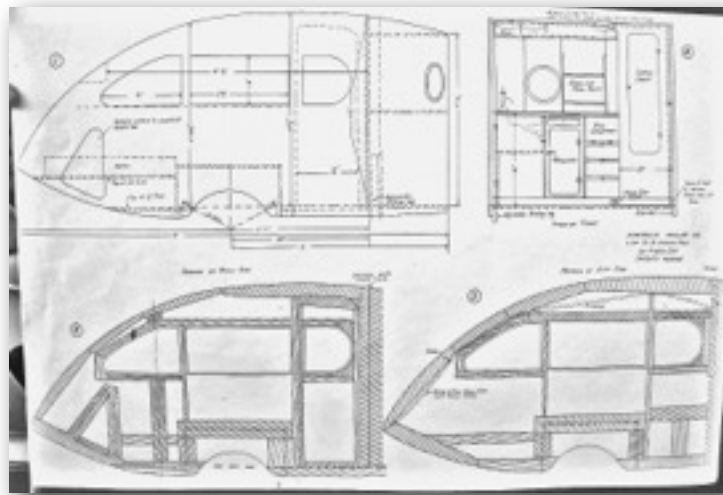
Having an automobile allowed this freedom, and now that Airstream existed, one could bring the comforts of home along with you on the road. The first designs for Airstream afforded comforts similar to what we were already used to have when traveling, for example on the train.

⁵⁶ Joanne Lee, “Airstream: an Evolution,” *The Airstream Clipper*(blog), Dec 09,2012



(<http://fe867b.medialib.glogster.com/media/74/74c2ad97385d97338011516ea8267a415615fa8f485146567d8763709daabf01/explorepahistory-a0b9z4-a-349-jpg.jpg>)

Traveling by train already had us trained into ‘converting’ our rooms from day use into night use. Why not incorporate this into trailer design? The first airstream design in 1935 had a wall that housed a wardrobe, a stove compartment, drawers, a small refrigerator, a plate rack, and a gravity sink based on the train models at that time. This was fixed along the bulkhead, and the rest of the trailer was a dinette by day, and converted to a bed at night. It probably felt like a train cabin itself, which most considered as being ‘first class’ on the train, i.e., being able to travel without having to share your space with strangers, having your own wash basin, bed, fresh sheets, and even a dinette to have lunch on.



(<http://sierranevadaairstreams.org/memories/history/peewee/airstreams/factory/1930s-airstream-torpedo.jpg>)

Utilizing the designated color scheme (outlined earlier) on the diagram chart will determine the multi-use of the compact space. The more colors in the area show the more efficient use. This is the diagram for the 1935 airstream.

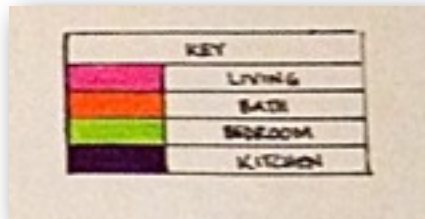
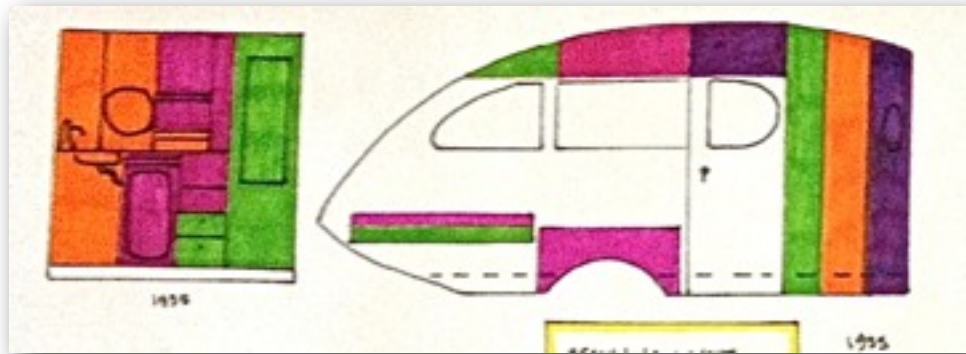
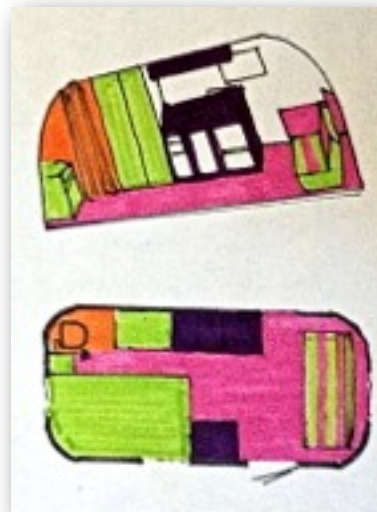
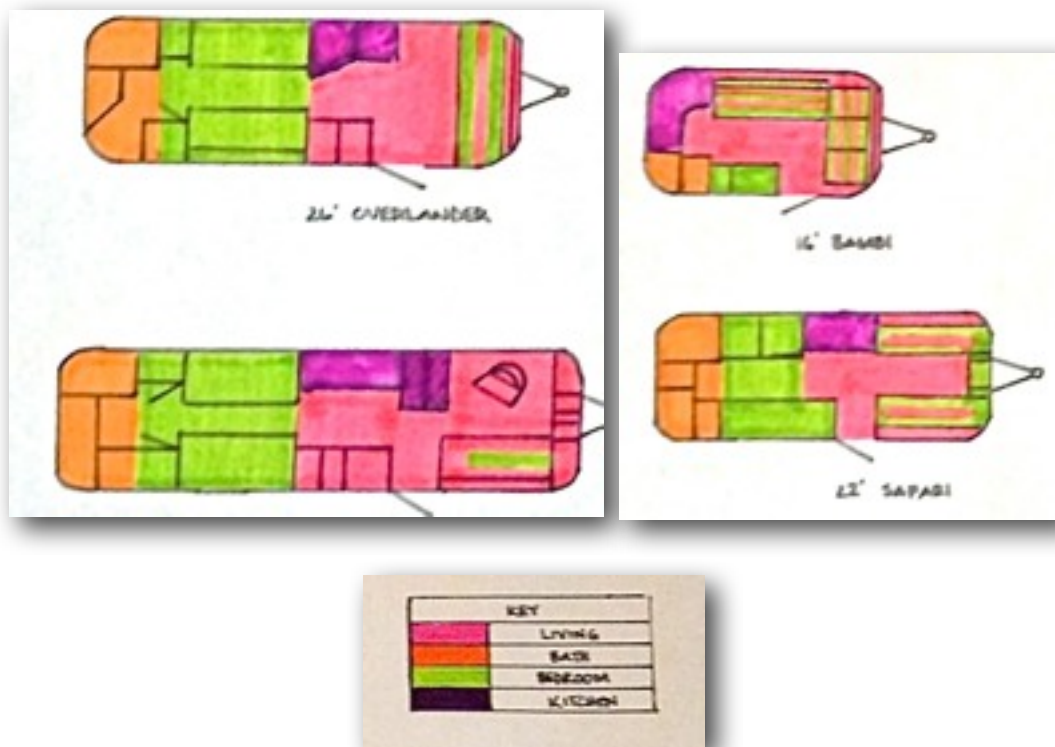


diagram courtesy of Ronald Balas

The Second World War (1939-1945) caused a halt in design and construction of Airstream, but things picked up as the GIs returned to the States. In the 50's, one can see that the design began to stretch out in length, which enabled the designers to maximize the vertical space for the same use. This gained in only height yet became less efficient overall.



The 1960's and into the 70's showed the growth of the size of the trailer, with the small Bambi (16') still making the most efficient use of space, while the others completely separate space and themselves from each other with the vertical self-imposed barrier. The biggest design of the 1960's lineup, the Sovereign, is not only the one with the least efficient use of space, but when the size and expense of the vehicle having to tow it is factored in, all efficiency is lost. This corresponds to the example in the Lucille Ball and Desi Arnaz movie *The Long, Long Trailer*, which showed an almost ridiculous amount of things that were being brought camping in order to enjoy nature.



As the Airstream and camper designs over the years have grown, horizontally and vertically, some designs still were very efficient for their overall use. These are some of the models, with an interesting change that became apparent. After the 1970's oil embargo, the 80's halted the design of the trailers in growth, for a time, but it was the least efficient of all of the designs that were most effected, when taking into account the vehicle fuel expense and maintenance. Its almost as if the *design* of space was non-existent. Not until the early 2000's did the spatial efficiency become a priority again.



In 2005, Airstream collaborated with Nissan Corp. to design a more efficient use of space in a trailer that can be towed with a more fuel efficient vehicle. This design, called the *Base Camp*,⁵⁷ utilized space horizontally and vertically with as many possible uses. Places all around became ‘non-specific‘ in their designation, leaving that up to the user to determine what they would become. Ironically, it is also the closest design to the 1935 original, which started it all. Wally Byam, without possibly being aware of all of the influences that were around him, designed one of the most efficient uses of a compact space in 80 years.



⁵⁷ Mike Hanlon, “Nissan enveils BaseCamp Airstream Trailer,” *GizMag-Automotive*, July 14, 2005

CONCLUSION

What did Wally Byam do that worked so well, for so long? After 80 years of being designed from mainly within the shell, due to the fact that the exterior has relatively stayed the same, and factoring in advancements in technology, and changes in fads, it would appear that the Airstream allows some things to repeat themselves as a common design trait, which may prove to be timeless, and universal. Or in other words: a good design. There are several elements that make up a good spatial design.

First would be that most things have *non-designations*. By that, I mean that they have multi-use instead of a specific designation. Taking the Base Camp into account, many of the items installed by the factory are deemed by their use, by each individual, yet manufactured with the greatest numbers in mind. What one person may use for a kitchen cabinet, another may use for a work station. Just because something is 'simply designed' does not mean it to be simple. Perhaps that is the key, if something is complicated to use, or to engineer, then the benefit may prove to be lost on the general public. Wally Byams' Airstream was simple in design, yet allowed for maximum use. As the saying goes: *Keep it Simple...*

Secondly, after researching countless designs for compact spaces up to very large homes, another trait that seems to define a generally accepted good design is *the connected living space*. It seems to be universally accepted to have the living area: cooking, eating, and lounging, all together. This is what the most successful compact spaces share. Although the spaces may be clearly designated by interior designs, such as cabinet or shelving, or even simple tricks as color or carpet, the boundaries are open, and seem to blend seamlessly, creating a very open and efficient space. Having a space do more than one designated, or desired task seems to quantify the space: double duty as office and bedroom = double the space; triple duty as dining, living, and cooking = triple the space. *Multi-use means multi-savings...*

The third common trait of a good design that became apparent in successful and well designed compact spaces is: *built-ins*. Every compact space had taken furniture that may be purchased, and used in the space, and combined it into the structure itself. A compact space may

only have one wall, which may now serve as a divider, a wall unit, storage, and even a possible bed. Again, multi-use built-in furniture becomes successful because it can serve many purposes for many users, as long as well designed.

Built-in also means: pre-planned. When something is built into a structure, it implies that almost all circumstances may have been considered, and properly planned, for that use in the space. The user appears to be 'ingenious' for having thought about the multiple use of the space ahead of time, and prepared for it. *Built-in means built-right, for the space and its use...*

Finally, and maybe more importantly, research into successful design of compact space is *editing*. This may prove to be the most daunting of all, yet only for the designer, and not the end user, if done well.

Going back to the example of the built-in: the unit will be proven successful if the design has been well thought out. This then can be quantified into the entire design of the space itself. That is what is paramount for any successful design, and especially for a compact space. On the other hand, if something is not well designed, the flaw will not only present itself immediately, but will be quantified throughout the size of a space: the smaller the space- the bigger the detail may seem, exponentially.

If the designer takes the time, and information, and properly inputs the data into the design, then the end result will not only appear custom to the specific user, but also to many users over time. The designer will deem what is most important in the design and edit out any extraneous elements, allowing for what is left to be a purely functioning design.

Now I wish I could simply use the saying: *form-follows-function* here, but remember that this design being considered is a multi-use design; whether it be a piece of furniture or all the way up to a complete space. That means many functions are still adhering to a solitary form, yet allowing the function to be preserved, yet not readily apparent in its design. Is this the key to a good design?

I am reminded of the saying: *If it looks like a duck, walks like a duck, and quacks like a duck, then it just may be a duck.* I know that this may be accredited to Walter Reuther (1907-1970) during the McCarthyite witch-hunts of the 1950's,⁵⁸ but being in architecture, I have to apply it to design. As I was taught by my professors in Architecture about *novelty architecture*, which is: *architecture that is used to specify its intent*, or according to Edward Tufte: the term to describe *irrelevant decorative elements in information design*,⁵⁹ or someone states *that's a couch*, then it must be a couch. Now if that couch happens to turn into a table for work purposes, when the lounging is not conducive, and then the work table turns into a bed when the work is finished and rest is warranted; then *that* becomes a good design.

Good design is the culmination of information design-which is *the practice of presenting information in a way that fosters efficient and effective understanding of it, not just attractively or for artistic expression.* This is the data that the designer would input from the research gathered, along with the editing needed for the desired space, to produce the final outcome. In a sense, one could say that the final design is the data visualization come to life.

For Wally Byam, and Airstream, this is what he did, and why he was so successful with the design. He first took information about the intended use, input all of the variables that may arise during its use, utilized real-time information while on the caravans and sent them back to the design team for updating and redesign, edited out extraneous information which in turn, edited the design, and came out with a simple form.

A simple form, that had multiple uses incorporated into that simple form, with built-ins that served the range of multi-uses, and editing of data that came from the extent of the multi-uses. That simple form became the visualization of all of that data.

That visualization of data became the form of the Airstream trailer.

⁵⁸ William Safire, "On Language; Falling in Love with Luv," *New York Times Magazine*, Feb 14, 1988

⁵⁹ Edward Tufte, *The Visual Display of Quantitative Information*, Self-published, 1982

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