

A BRIEF HISTORY OF THE SHOPPING CART:

An Intersection between Great Design, Good Problem Solving, and an Infamous Urinal

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Every year Oklahoma City hosts the *Annual Cow Chip Tossing Contest*. Its list of recent winners are posted on a website associated with a local Oke City traveling guide. While this might be reason alone for aspiring Kansas City designers to make the four-hour drive south, another reason could be to pay homage to a great Midwestern problem solver.

As designers we remain humbled by the realization that great design is never better than good problem solving. Humble designers also realize that great design remains elusive because good problem solving is not as easy as it may first appear. When presented with problems, we designers often fall prey to offering singular answers that are much more clever than the nature of their defining constraints. Seasoned problem solvers, on the other hand, remain intensely fascinated with a problem's ongoing relationship to changing conditions. In fact, within the business of good problem solving, a problem artistically framed by its own shifting context will withstand the almighty test of time rather than its initially apparent solution.

Having said this, I can also tell you that it has taken me a lifetime to warm up to Oke City and its tired dusty skyline. Finally, as a designer and frequent admirer of problem solvers, I will admit that this city has become one of my favorites, even if I have only experienced it from the air conditioning of my

interstate-bound Toyota pickup. What other city can lay claim to one of the best industrial designs of the 20th Century while conducting its business of good problem solving from a dying chain of Piggly Wiggly grocery stores?

1. A Pair of Immigrants

Sylvan Goldman was born in 1898 to a family of Jewish Oklahoma Sooners. His father had recently immigrated to America from Latvia and led the family westward in search of opportunities promised by a new frontier. Goldman would later capitalize on these opportunities by having an unprecedented impact on the American grocery industry.

During Goldman's childhood, grocery shopping was a "general store" activity. Clerks would gather food goods in requested quantities and sell them to customers waiting behind the counter. While Goldman attended high school, a shift in grocery shopping began to occur. A grocer in Memphis, Tennessee, opened the first self-service grocery in 1916. His grocery offered four aisles displaying 605 items for purchase. Customers roamed the aisles, gathered what they needed, and carried their groceries to the check-out counter themselves.

After graduating from college, Sylvan Goldman left Oklahoma to study new trends in retail and discovered a wealth of resources in California. Goldman developed a keen interest in the thriving west coast self-service grocery stores. He brought his newly acquired knowledge back to Oklahoma and with the assistance of his brother, developed a small chain of self service grocery stores — the first ever seen in his home state. Shoppers used wire woven baskets for gathering their own groceries and the small grocery chain began to grow.

At about the same time, a young disgruntled French painter had just left Paris and was sailing towards New York City. Though he was not Jewish, and was never destined to become a Sooner, he possessed a knack for problem solving similar to that of Sylvan Goldman. Marcel Duchamp set foot on American soil in 1915.

By the late 1920s, Goldman had sold a good portion of his grocery chain to Safeway. When the Great Depression hit, Goldman and his brother watched as their Safeway stock became worthless, virtually overnight. He rebounded soon after with a statement that may well define the simple, yet optimistic, sensibilities of post-depression entrepreneurship: "The wonderful thing about food is that everyone uses it — and only uses it once." During the early 1930s, Goldman and his brother began buying Piggly Wiggly self-service grocery stores. By 1935, Goldman owned half of the Oklahoma City-based grocery chain. Despite the enthusiasm of new ownership and a slowly stabilizing national economy, the Piggly Wiggly grocery stores continued to struggle and Goldman once again faced the potential for failure.

2. His Problem, Our Problem

Rather than frantically searching for answers that might save his grocery stores, Sylvan Goldman began to contemplate his problem. He soon realized that his problem as an entrepreneur was no different than the problem his customers faced while shopping. His problem identification outlined a simple equation:

$$\begin{aligned} \text{Grocery chain grows weary} &= \text{Customer's arms grow weary} \\ \text{Must sell more food} &= \text{Must carry less food} \end{aligned}$$

By identifying a shared problem of both entrepreneur and customer, Goldman began the good business of problem solving. As he leaned back in the folding chair of his office, his mind must have been racing — Piggly Wiggly must allow more groceries to become accessible to everyone while maximizing sales potential for itself.

Soon after arriving in America, and not long before Goldman's Piggly Wiggly problem, Marcel Duchamp faced challenges of his own. The art community in New York and Paris had become increasingly closed-minded about the specificity of painting. By contrast, a rapidly changing industrial culture had emerged with an increasing absence of specific authorship. Duchamp felt trapped. He was eager to address the issues of mass production and the new consequent problems for art and society alike.

In 1917, Duchamp helped establish a curation committee for the *Society of Independent Artists Show* at Grand Central Palace. The idea of the show was a profound protest against the New York City highbrow art scene: anyone could participate as long as they filled out a short form and paid a small fee. By facilitating a process which allowed artistry to be accessible to the general public, Duchamp had effectively created a specific political system designed for self liberation: he would soon transform himself into a singular "everyone."

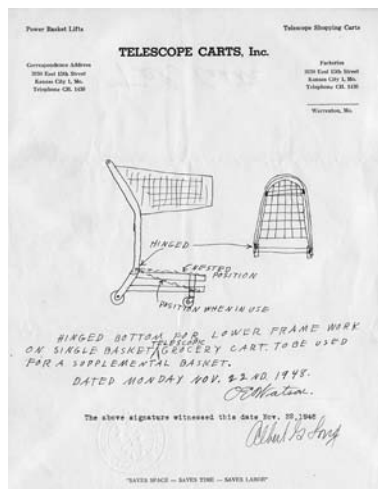
3. An Infantile Kit of Parts

The curation of the *Independent Artists Show* got off to a shaky start. Duchamp observed his co-curators bickering over the artistic viability of many submitted pieces. They then uncovered an entry submitted by Richard Mutt from Philadelphia. Before them stood a porcelain urinal turned sideways, displayed on a common pedestal. Despite the bylaws of the show, Duchamp's co-curators could not allow this piece to coexist within an art context. Duchamp, however, had a deep empathy for Mutt's re-appropriation of a factory produced object.

Back in Oke City, Sylvan Goldman's big idea had little to do with great design. He was far more interested in solving a problem. He knew that his grocery stores had no room for carts and rent was too high to allow the large amounts of cart storage necessary for all shoppers. He grabbed the folding chair from under himself, snagged a wire basket and headed out to find Fred Young, his grocery store handy man. Young also worked in town as the neighborhood mechanic, and Goldman arrived at Young's shop with a "kit of parts." Goldman had partially solved the problem of efficient storage, but had not yet addressed increased volume and cart mobility.

Young and Goldman tried attaching wheels to the folding chairs, but the weight of groceries on rough parking surfaces proved too much for the wheel attachments to the wooden legs. They next modified a metal folding chair and added an upper shelf for an additional basket. The baskets were easily removed and "nested" after shopping while the chair assembly could be folded and also stored efficiently.

They completed their first prototype in 1937 and had several made for use in the Oklahoma City Piggly Wiggly grocery stores. Though the prototype was merely a sketch of an idea, Goldman was less concerned about discovering an immediate solution to his problem. He remained far more fascinated with how his shoppers might react to his new shopping cart.





4. The Art of Contextual Framing

Goldman's cart met immediate resistance. Women associated the cart with a baby carriage and had done enough baby schlepping and carriage pushing. Men were insulted by the apparent suggestion that their arms were not strong enough to carry groceries. Goldman realized that he had not sufficiently identified the problem and was still far from a solution.

Richard Mutt's piece was flatly rejected by the curation committee. Before resigning from the *Independent Artists Show*, Duchamp called an acquaintance, Alfred Stieglitz, who was also a photographer of fine art. He convinced Stieglitz that an important piece of art needed to be photographed. Soon after Mutt's entry was removed from the show's gallery, a photograph of the urinal was displayed amongst other fine art in Stieglitz' *291 Gallery*.

Weeks later, the urinal disappeared all together and rumors revealed Richard Mutt as Duchamp's straying alter-identity. Duchamp's identity problem as an artist "at large" was now clear.

Goldman realized that his problem lacked contextual utility and continued with his problem solving process. He hired pretty women to pose as Midwestern housewives and push his new carts from aisle to aisle, slowly filling each basket with food. The consumer response was better, but still not widespread. Goldman reconsidered the diversity of his audience. He next hired new models (men and women of different ages and shapes) to fill his carts with food.

The advantages of using shopping carts soon caught on. By creatively shaping context to share an idea, Goldman allowed customers to discover the new cart for themselves. Soon, no man or woman was shopping without his grocery cart. Today, over 25 million shopping carts fill our retail stores and parking lots. With exception of the automobile, shopping carts remain the most used vehicle in the world.

The photograph in the gallery was no longer a reference to a misused bathroom fixture by an unknown artist. Through contextual framing provided by Stieglitz' *291 Gallery*, the urinal had become fine art. A few other artists began to understand Richard Mutt's problem. They began to personalize their own interventions with mass-produced objects and systems. Jackson Pollock flung store-purchased paint such that it remained "paint product" on canvas. Don Flavin placed combinations of bare fluorescent light fixtures in galleries. Donald Judd stopped painting and began making specific objects, stacking plywood into boxes and assembling milled aluminum. Marcie Miller Gross began folding hospital towels. Jim Woodfill began weaving extension cords. Marcel Duchamp eventually stopped making art all together and began playing chess. Sylvan Goldman retired early as a problem solver and a very rich man.

5. Systems Shaping Systems

The early prototype of the shopping cart was more a problem identifier than a solution. From this early sketch, the shopping cart evolved almost organically during the next 50 years. Goldman proved to be a true problem solver by sharing a discovery-based process, which proved malleable to the changing social, economical, and technological systems from his time forward.

In 1946, Orla E. Watson of Kansas City noticed grocery store parking lots becoming larger and larger. This, of course, was due to a thriving automobile industry and a boom in transportation systems. The necessity to disassemble the "folding chair" shopping carts became increasingly difficult. Watson created a telescoping cart that did not require assembly or disassembly of its parts. Almost humorously, the nesting action of these new carts remained formally similar to the upper and lower basket arrangement of Goldman's original cart, resembling some cartoon drawing of a species in an awkward stage of evolution. In a bizarre departure from good problem solving, grocery chains even introduced a power lift, which raised the lower basket to check-out counter height after the upper basket had been rotated vertically out of the way. (This power lift was likely created by a clever designer who was all too proud of his solution.)

More and more, single individuals no longer played key roles in the shopping cart's evolution. The multitude of bagboys deserves partial credit for the single telescoping grocery cart. The added function of mass mobility with this improvement allowed the grocery cart to multi-task, remaining useful even while being stored. A single bagboy could retrieve many carts at once from parking lots that were quickly growing even larger in size.

After the Great Depression, larger cities rebounded and retail density increased. Urban grocery stores required tighter check-out lanes. New sales counter systems were designed to maximize check-out efficiency. The grocery cart once again changed form: its single basket gracefully cantilevered from a singular offset frame. This allowed the grocery clerk to pull the cart through a void in the check-out counter while its basket remained hovering above, allowing more room for the customer to pay the bill.

Post World War II technological advances allowed the grocery cart to accommodate big-box grocery centers by introducing high-strength plastics. To this day, runaway carts cause less damage to parked automobiles while customers can buy even more groceries during a single shopping outing. Suburban discount grocery stores offering bulk grocery sales often use these carts as do other retail centers selling larger products. These carts have been integrated into a suburban retail "kit of parts" and are delivered to startup groceries with ready-made parking lot disclaimers to be displayed on pre-manufactured exterior wall systems.

Sylvan Goldman's well-identified problem is even positioned to survive our post-industrial culture. Most sales-based websites offer a traditional shopping cart icon to click once a purchase has been decided upon. A problem that originally received consumer resistance now offers millions of internet shoppers the perceived comfort of easy purchase. The evolution of shopping cart design, through a continued reintegration of evolving systems, has allowed shoppers to embrace their cart through a collective design process spanning several generations. As a problem solver, I suspect Mr. Goldman would consider our shopping cart a great design — I know I do.

