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## For Santiago's Poor, Housing with Dignity

NOVEMBER 7, 2008

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SANTIAGO, CHILE—A young boy plays unsupervised in front of a house that has a small wooden sign, handwritten in marker: *Se venden helados*—ice cream for sale.

Behind this rather ordinary scene is an extraordinary story with deep Harvard roots. In this tidy development of row houses, 170 families who once lived illegally in a squatter settlement have become homeowners. Stay-at-home moms feel safe leaving their children in the front yard; some have started small businesses. It is a far cry from the lawless environment of the *campamento*, or squatter settlement, that sat on the same piece of land until 2004.

The development has transformed residents' lives. It is also transforming how to build housing for the poor. Similar developments are built or under way at a dozen other locations in Chile, and there are plans to replicate the project in other countries.

In these housing developments, the architecture firm ELEMENTAL departs from common practice in several crucial ways. Their pathbreaking work has won one of the most prestigious international architecture awards so far.

The Graduate School of Design (GSD) and the Santiago office of Harvard's Darrin D. Rockefeller Center for Latin American Studies (DRCLAS) helped conceptualize the project and entered an international competition to design very low-cost housing for the poor in Santiago. Harvard provided seed funding. (Winning proposals in the 2003 contest came from Venezuela, the United States, Uruguay, Spain, the Netherlands, and Chile.) ELEMENTAL, formed around the goal of building a handful of housing developments, has taken on a life of its own and branched out far beyond this

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vision, but Chileans with Harvard connections remain influential. The firm's principals include director Andrés Iacobelli, M.P.A. '01, and executive director Alejandro Aravena, a professor of architecture at Pontifical Universidad Católica Chile who was a visiting professor at the GSD from 2000 to 2005. Support from Pablo Allard, M.A.U. '99, D.Dn. '01, director of Católica's undergraduate programs in architecture, landscape, and environmental studies at that university, has also been instrumental.

THE RED-AND-WHITE ROW HOUSES are located in the Renca district, less than half an hour by car from downtown Santiago. Chile is a country that venerates architects, commonly listing their names on buildings' cornerstones; yet, outside of Santiago's well-to-do areas, evidence of thoughtful design is all too scarce. Even in the city center, skyscrapers' shiny glass walls quickly give way to walls around houses, tall enough to obscure fully the homes they protect. Each block is a patchwork of materials: brick next to wrought iron next to opaque plastic. People on horseback share the road with cars.

The high housing density of ELEMENTAL's projects allows for purchasing land close to the city center (one development fits 93 units onto 1.2 acres). As a result, residents don't need to move to an outlying site an hour-long commute (or more) away from jobs. They remain in the same neighborhood, with the same neighbors. They don't have to change jobs, find a different bus route to work, or enroll their children in different schools.

The government gives a subsidy of \$10,000 for each housing unit, an amount that must cover the cost of the land, building materials, and construction. (By way of comparison, the price for a middle-class house in Chile is about \$60,000.) In the case of the Renca site, the developers had their work cut out for them: the *campamento* bordered on a landfill, so there was polluted soil to scoop up and remove.

That soil now sits at the development's edge, where, in the form of a hill capped with a layer of clean soil, it will serve as a park. The residents have planted trees, erected brick barbecue pits, and installed stairs leading from the rows of townhouses up to the park. Their pride in the park shows in the details: at the base of each young tree is a circle of stones, painted a cheerful Smurf-blue. The residents have done all this at their own expense. "Every time we come here, we have surprises," said ELEMENTAL project manager Gonzalo Arteaga on a visit in late October. "The energy is incredible."



**Ana Lamilla surveys the Renca development from the still-under-construction park on a ridge above. Behind her, part of the squatter settlement where she once lived remains.**

Through the wrought-iron bars of a fence bordering the development, a shantytown is visible. Ramshackle structures lean on one another; they have roofs and walls made of corrugated metal, or just canvas. It is a stark contrast to the neat, square corners of the ELEMENTAL units. This is part of the old *campamento*, explains Ana Lamilla, who lived here for 25 years before moving into one of the new homes. Some of the original residents doubted that the new development would succeed and chose not to participate. They stayed in their homes and watched as most of the plot was cleared and orderly rows of townhouses rose from the ground. “They had to see it to believe it,” she says. (These families have now agreed to vacate their old homes and move into ELEMENTAL houses; the firm is constructing additional units in a second phase.)

Working within the limited subsidy ceiling, the ELEMENTAL architects constructed much larger homes than would normally be possible with \$10,000, but left the interiors unfinished. The residents moved into houses with bare concrete floors and plasterboard walls; ELEMENTAL provides the skeleton, and leaves the rest to the residents.

ELEMENTAL builds the townhouses three stories tall, but fills in only the second floor and the staircase to get there. Residents must complete their own home interiors; the firm holds workshops on building structurally sound staircases, floors, and ceilings. (Renca is an exception; ELEMENTAL completed these units' third floors because additional funding became available.) Aravena is fond of saying that each unit has “the DNA of a middle-class home.”

Rosa Estrella Ortega Roa, for one, has big plans for her unit, where she lives with her two-year-old grandson. Already, she has stained the living room's exposed brick wall a warmer color; she has fenced in her front yard and added a variety of lush plants. (Ortega sells plants, and also gas fireplaces, for a living; an upstairs bedroom holds stacks of the fireplaces in boxes.) Ortega moved in only a few months ago, and most of the walls are still bare concrete. Even so, she says, this is a big improvement over the *campamento*, where she had lived all of her 58 years. There, her home had a muddy dirt floor.



Rosa Estrella Ortega Roa stands in the kitchen of her home in the ELEMENTAL development in Santiago's Renca neighborhood. She moved in just a few months ago, and plans to finish the walls and ceiling. Even with unfinished walls and plywood overhead, this is a big improvement over her former home in the *campamento*, which had a muddy dirt floor.





Ortega (right) talks with ELEMENTAL project manager Gonzalo Arteaga in the bathroom of her home. Despite the unfinished walls, residents are pleased that the bathroom in each unit has a bathtub and a window that opens.



Ortega stands in front of her home. She fenced in her yard and filled it with plants, which she sells to support herself and her two-year-old grandson.

The husband of Miriam Huerta, another resident, is a builder, so the Huertas

acted more rapidly to embellish the home where they live with their three children—so much so that it is almost impossible to see the home's bones. They filled in the backyard to make a separate room for the kitchen; an arched doorway sets it off from the living room. They replaced the plywood stairs with a spiral staircase of polished wood and wrought iron. In their bathroom, they tiled the blue and replaced the standard-issue sink with an edgier model: a clear glass resting atop a freestanding drainpipe. The walls have been plastered over and painted warm hues; the bedrooms are carpeted.



Miriam Huerta stands in the doorway of her home in the ELEMENTAL project at Renca. When residents move in, the units lack distinctive touches, but because residents are not required to take on debt, so they can make improvements—such as this fancy door, with which the Huertas replaced the original, more basic one—using discretionary income (and the “sweat equity” of their own labor).



**Ana Lamilla, one of the community organizers at the Renca project, with Gonzalo Arteaga in the Huertas' living room during a recent tour. Visible in the background is the archway leading into the Huertas' kitchen, which they created by enclosing the backyard. This unit, in original condition, was identical to Rosa Ortega's; the Huertas finished the walls and ceilings and replaced the staircase.**



**The Huertas' bathroom displays color-coordinated finishings: they replaced the toilet and sink and tiled the walls, floor, and bathtub.**

In the history of subsidized housing in Chile, “there had never before been a [project] that involved the community that was going to live there in the planning process,” says Steve Reifenberg, M.P.P. '88, executive director of the DRCLAS office in Santiago.

The idea would be revolutionary anywhere. In the face of a pervasive attitude that recipients of housing subsidies should feel lucky to be getting anything, and should be happy with whatever they are offered—no matter where it's located or how it looks—getting even nominal input from those recipients is rare. In the case of Renca, the architects secured residents' approval for the overall design *and* let the residents choose interior details. With a fixed amount of money to spend, ELEMENTAL let the residents reach consensus on what features they would like installed as standard and which they could do without. The original plans included showers, but the residents' group opted to forgo some other features (e.g., raw wood doors instead of finished) so they could have bathtubs.





The units also had no-frills front yards in their original condition; the Huertas embellished their windows and added a fence, a bench, and an ornamental awning.



Miriam Huerta waits for a bus across the street from her home. Working in conjunction with residents, ELEMENTAL negotiated with the owner of the land on which the *campamento* sat, and ultimately purchased the land to give to residents, along with their houses, so they wouldn't have to move. The development's density made it possible to house everyone in this convenient location, a quick bus ride from the city center. It was important to the project's designers that residents not be made to n

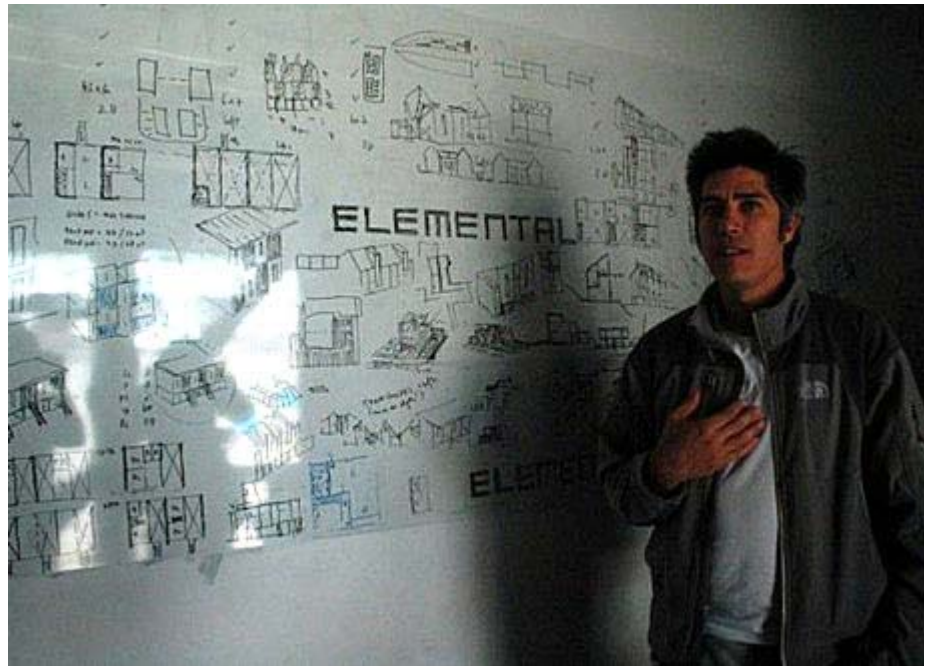
far away, uprooting their lives and forcing them to enroll their child in different schools and find new transportation routes to work—or change jobs entirely.



At the Renca development, the housing units are arranged in clusters around central courtyards, with 18 units opening onto each courtyard and an electrified metal gate at each end. Residents say this affords priceless safety and security. Visible in the foreground: a tree plant residents, surrounded by rocks—also placed and painted by residents. Developers and residents alike say the high degree of input ELEMENTAL allowed the residents has made them take pride in the development; motivated them to add their own improvements.

ELEMENTAL CONSIDERS ITSELF a “do tank,” as opposed to a think tank. Instead of discussing and arguing with critics, says Aravena, “we proved our point by building things.”

Funded at first by Harvard, Católica, and the Chilean government, ELEMENTAL became a for-profit firm in 2005. Although government subsidies pay for land and materials, private companies, such as Copec, the Chilean oil firm, pay for the architects’ professional services as part of their corporate social responsibility programs. The architects supplement their income with projects for private clients.



**Alejandro Aravena in his office.**

ELEMENTAL has designed similar housing in two other Chilean cities—Iquique in the north, and Temuco, south of Santiago in the Lakes District—and in Milan. In addition to the projects already completed, more are under way in Antofagasta and Valparaíso, as well as in three other districts of Santiago and in Monterrey, Mexico.

From an initial focus on housing, the firm is branching out to design public spaces such as street markets, a promenade on Cerro San Cristóbal (a hill featuring the world's largest urban park, an attractive space that is nevertheless not as pedestrian friendly as it could be), and a "flyover" pedestrian walkway to connect two parts of downtown Santiago that are cut off from one another by a busy freeway. "We believe cities are a shortcut to equality," explains Aravena. "Without having to wait for income redistribution, we can upgrade quality of life through infrastructure, public spaces, transportation, and, of course, housing."

**ACROSS TOWN IN Lo Espejo**—the Santiago metro area's poorest, and most densely populated, district—ELEMENTAL designed a pilot project of 30 units in the first phase of a development that will ultimately house 350 families from a former shantytown. Here, the residents chose a three-floor duplex configuration; one family lives on the top two floors, and another family below, in a larger first-floor unit. (The lower unit's bedrooms are in the rear portion that stretches out from behind the upper two floors, making neighborly harmony more likely.) Units are at various stages of construction, with building materials piled up in some front yards as owners add finishing touches.





Marta Herrera (pictured here with Gonzalo Arteaga) has set up a sn convenience store in the front room of her house at the ELEMENTAL development in Lo Espejo. Herrera, who lives here with her husband and two children, says she was unemployed before. "I prefer this," she says. "My life is so happy now."



Herrera stands in the doorway of her home.





**Joanna Vera's duplex; the woman pictured is her downstairs neighbor.**

Joanna Vera Pérez has decorated her home—where she lives with her son, 16, and two daughters, 14 and 3—in tropical-fruit shades. On her living-room wall hang two photographs showing her with Chile's president, Michelle Bachelet, who spoke at the development's dedication ceremony.

Vera was one of the residents who believed strongly in what ELEMENTAL was to do; as the project developed, so did her own political voice. She personally negotiated the price with the landowner; during construction, she visited the site every day to monitor progress. After she met the president at the dedication, Bachelet asked her to serve on the committee for Santiago's bicentennial celebration, which will take place in 2010. Vera says most other committee members are far wealthier than she. "I represent Chilean poverty," she said with pride.



The site of the second phase of the ELEMENTAL development in Lo E where a shantytown once stood. Even from Santiago's most impoverished neighborhoods, the majestic Andes are visible in the distance.



Cecilia Castro (right) talks with Gonzalo Arteaga and another resident of the Renca project.

These projects stand for "more than just building houses," says Cecilia Castro, a vocal resident of the Renca development who now leads an advocacy group ca

*También Somos Chilenos—We, Too, Are Chileans.*

At the dedication ceremony for the Renca development in May, Castro gave a speech. For the first time in her life, she said, she felt proud to be Chilean.

One of ELEMENTAL's goals for the project was that the units increase rather than decrease in value over time. They didn't have to wait long to measure their success: the very day they were allowed to move in, some residents received offers of \$20,000—double the amount of the subsidy that had built them.

But, says Arteaga, nobody accepted.

Harvard Magazine *associate editor Elizabeth Gudrais traveled to Chile in October to report on projects involving Harvard faculty and alumni. Further reports from her trip will appear online and in future issues of the magazine.*

*To learn more about Harvard in Chile, visit [the DRCLAS website](#) or read “Ty Knuts,” from the May-June 2004 issue of Harvard Magazine. Readers in the Boston/Cambridge area can meet Steve Reifenberg on Tuesday, November 11 at [Harvard Book Store](#), where he is scheduled to discuss his memoir, Santiago's Children: What I Learned About Life at an Orphanage in Chile, beginning at 7:00 p.m.*

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## Comments

### 1. On November 7th, 2008 *David M. Billikopf* said :

You can't imagine how happy I am to read the article I just read. I graduated Harvard, A.B. 1948 (Class of 1947) and have been living in a suburb of San Francisco since 1951, give or take a few years in the middle.

I am especially interested because my Chilean god-daughter works for a public housing organization, Un Techo para Chile, aimed at eliminating campamentos by replacing them with permanent housing, community by community.

Congratulations and Thanks,

David M. Billikopf

### 2. On November 7th, 2008 *Dr.B.Thyagarajan* said :

This is a very enlightening development and well presented in this essay. It is more good in the USA as well, if it is widely publicized in the US as well. It will motivate many of the occupants of the old “PROJECTS” style buildings, to move into better housing for the poor..In the forthcoming administration of President-elect Barack Obama, this may serve as a stimulus package to up

poor...

Prof.B.Thyagarajan

3. On November 7th, 2008 *Nalam Ravindranath* said :

Simply Wonderful. If youth all over the world think in this manner, we could have a world free of poverty in no time. Home is the basic need for any family and a decent home is the key to a decent family and a decent society. It gives confidence and a security which could be reduced and living standards could be improved. I congratulate the group and I wish this type of projects are brought to my country, India, where every house/home always remains an eluding hope to millions of my country people. Give the best to the people associated with this project.

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