## The Integral Urban House

Berkeley's Integral Urban House (IUH) was a nationally publicized living laboratory that remodeled marginal housing stock to prefigure the urban commune of a future ecotopia. Belying its staid Victorian exterior, the house embodied a revolutionary transformation of urban life. Solar energy collectors, a windmill built of recycled oil drums, and biosystems including a composting toilet, fruit trees and raised vegetable beds, a greenhouse, an aquaculture pond, beehives, and pens for rabbits and chickens echoed the functional network of broader ecological systems. Operating from 1975 to 1984, the IUH and its reimagined domestic practices demonstrated a radical alternative to North America's consumerist suburban housing. It also offered a substitute for the period's back-to-the-land pastoralism: a counter-project that melded an everyday countercultural environmentalism with ecological design experimentation—yielding a new urban subjectivity of lived ecology. While its architecture appeared ordinary, and the project was largely ignored by professional design journals, the IUH held an important place within a Bay Area countercultural design milieu committed to exploring how ecological relationships and practices could be performed differently. Far from retreating from pressing socio-economic and political issues, its exploration of domestic infrastructural self-reliance became a platform for collective action. In doing so it upended the conventional use of model houses as templates for suburban mass consumerism, instead emphasizing architecture's role in scaffolding radically collective domesticity, right livelihood and an emerging bioregionalism.

## [FIGURE X. View of the IUH?]

The Farallones Institute

The IUH was a tool for revolutionizing the way Americans lived, borne of a series of shared meals at a Chinese restaurant in Berkeley. The small group that gathered were passionate about establishing ways of living that would counter what they saw as the United States' environmentally destructive and socially stultifying industrialised consumerism.

Dreaming and arguing across the table one would find psychiatrist-ecologist Sterling

Bunnell, designer Art Boericke, photographer Barry Shapiro, architect-educator Sim Van der

Ryn and the entomologist-ecologist couple Helga and Bill Olkowski. The group was connected in turn to a wider circle of West Coast technologists, designers, social thinkers, and scientists that included Ursula K. Le Guin, Peter Calthorpe, Ant Farm, Stewart Brand, Peter Berg, Jay Baldwin, John Todd and Ernest Callenbach. By 1974, the dumpling-fueled discussions and some vital philanthropic funding had resulted in the Farallones Institute, ambitiously pitched as:

[...] a living, learning and research community to extend ways for people to move towards lighter living more in keeping with finite resources, ecological harmony, personal growth, and cooperative effort[.]<sup>3</sup>

The future vision conjured by the Institute's dinner-fueled conversations reads like something from Callenbach's *Ecotopia*—his influential 1975 speculative-fiction novel depicting Northern California as a post-materialistic, ecologically-focused bio-region.<sup>4</sup> The IUH can be similarly read as the attempt to design and prefigure its ecotopian domestic ideal.

The formation of the Farallones Institute and its subsequent ecological design program involved a wide range of expertise and a large cast of contributors, but was most forcefully propelled by Sim Van der Ryn and the Olkowskis. By the time the Farallones Institute was established in the mid-1970s, Van der Ryn had developed a reputation as a proselytising design educator and activist at the centre of a countercultural network exploring ecological sustainability, alternative education, communal life and grassroots urban planning. His disciplinary insurgency had been galvanised by the triggering effects of Buckminster Fuller's entrancing lectures, Ian McHarg's influential approach to situating design projects within a natural systems context, LSD experimentation, engagement in the West Coast embrace of Zen-Taoist nature mysticism, and the harrowing spectacle of Governor Reagan's violent dismantling of the Berkeley "People's Park" (where Van der Ryn had studied the students' and hippies' spontaneous participatory design process). Radicalised by these

<sup>&</sup>lt;sup>1</sup> Olkowski interview; Sim, Design for Life? Christian Science Monitor article)

<sup>&</sup>lt;sup>2</sup> Kirk, Counterculture Green

<sup>&</sup>lt;sup>3</sup> Sim Van der Ryn, "To Plant a Seed…", Farallones Institute Newsletter, January 1976, p.1. The exact founding date for the Institute is unclear. Newsletters in the mid-1970s date it as July 1974, but other accounts place it as 1972, or as early as 1969 (the latter suggestion perhaps because the Institute initially operated as a project of the Van der Ryn-initiated non-profit Community for Environmental Change, incorporated in 1969).

<sup>&</sup>lt;sup>4</sup> Callenbach, Ecotopia

<sup>&</sup>lt;sup>6</sup> Van Der Ryn interview; Van der Ryn, Design for an Empathic World. Van der Ryn had a long association with the Green Gulch Farm Zen Center (frequented by Stewart Brand and his circle), building his first composting toilet there in 1974 (Cowan, Ecological Design, 70-71), and describes his experience with LSD in *Design for an Empathic World* (xxx). The People's Park was created in the late-1960s on a piece of derelict UC Berkeley-owned

experiences, he subsequently emerged as a forceful actor in events and initiatives that have come to define a West Coast countercultural design milieu. The "Freestone" outdoor festival of hippie makers in March 1970, for example, grew from Van der Ryn's invitation to counterculture architects, planners, ecological activists and educational reformers, that they join together in learning to "design new social forms, new building forms, that are in harmony with life." And his contentious professional influence was highlighted soon after at the July 1970 International Design Conference (IDCA) in Aspen, where keynote speaker Reyner Banham vitriolically dismissed the radical eco-designers who staged disruptive interventions as "Sim Van der Ryn's tribes."

Van der Ryn's hip design iconoclasm was offset by the zealous, spiky scientific demeanour of the Olkowskis. The pair were a tight research, teaching and activist team, and well-connected, energetic actors in a Bay Area environmentalist scene buzzing with new ideas focused on social, political, and environmental impact. Their ecological systems expertise was centred in integrated pest management (environmentally sensitive methods avoiding pesticide intensive activities) with a particular interest in urban agriculture. They played roles in the establishment of the San Francisco Ecology Center in early 1970 as well as the introduction of domestic recycling centers in Berkeley. That activity aligned with the focus of their publicly-oriented activism on personal action in the domestic sphere—

recycling, energy conservation and food production. The importance of self-reliance in an urban setting was a core ideal in their work and they could be aggressively theatrical in articulating this emphasis. In a class on natural resource management at UC Berkeley following Earth Day, Bill Olkowski was determined that students understood what it took to put food on their dinner plate: "I used to go through the steps of first holding the chicken, then breaking its neck, then bleeding it by cutting its throat right there in the classroom."

land off Telegraph Avenue. The citizen-design and built park was the scene of protests over its threatened destruction and on May 15, 1969 ("Bloody Thursday"), then-Governor Ronald Reagan ordered a violent repression of the protestors (see Raynesford chapter). Ian McHarg's seminal publication was *Design with Nature* (1969); Van der Ryn taught alongside McHarg at the University of Pennsylvania during a 1967 visiting appointment.

<sup>&</sup>lt;sup>7</sup> Evocatively charted in Castillo, "Counterculture Terroir"

<sup>&</sup>lt;sup>8</sup> Forrest Wilson, Editorial, Progressive Architecture, July 1970. Van der Ryn invited Ant Farm to participate. Scott, *Living Archive 7*, 73. NB Advertisements for a Counterculture insert in this issue – significant, seminal interjection of design counterculture in establishment arch. Press. Controversial, Wilson apparently lost job over it (confirms this in intro to Jersey Devils book).

<sup>&</sup>lt;sup>9</sup> Reyner Banham, "The Education of an Environmentalist" 54.

<sup>&</sup>lt;sup>10</sup> Ref – Ecology Center founding (Olkowski records)

Helga Olkwski and William Olkowski, *The City People's Book of Raising Food* (Emmaus PA: Rodale Press, 1975)

While Helga tended to be less confrontational, both Olkowskis vigorously asserted that making cities ecologically stable and healthy places to live was society's critical challenge.<sup>13</sup> Building Concepts

The creation of the Farallones Institute was a vital step toward the Integral Urban House and its combination of Van der Ryn's and the Olkowski's ambitions. The concepts for ecological living applied at the Integral Urban House emerged with the Institute's parallel development as a non-profit organization, research facility and communal living experiment dedicated to what it termed "Whole Life Systems." Inspired by the back-to-the-land movement, the Farallones Institute was focused during the mid-1970s on designing "selfsustaining living patterns that increase our awareness of the balance between the realities of Nature and the needs of Man." <sup>15</sup> A significant amount of this activity was carried out at the Occidental Arts and Ecology Center, also known as the Rural Center. <sup>16</sup> A live-in collective of hippie-scientists built its off-grid rural research and education campus in Sonoma County, battling authorities over planning permission for unorthodox infrastructures such as composting toilets and grey water recycling. <sup>17</sup> Here, the Institute developed research and teaching programs centered on the Whole Life Sytems curriculum and ethos, tapping into an audience primed by their reading of holistic hippie lifestyle toolkit the Whole Earth Catalog. 19 The Rural Center's community of independent researchers and educators involved thousands of visitors in programs for rethinking domestic practices and technologies, such as composting systems, food production and renewable energy generation (including seven "solar cabins" built to study passive solar design techniques). <sup>20</sup> Through the 1970s the Farallones Institute was one of the most prominent North American countercultural organizations modelling the transition to a radically different society.<sup>21</sup>

## [Figure. Rural Center cartoon view from self-guided tour]

While the Rural Center grew as an autarkic outpost for countercultural ecology, Van der Ryn's eco-design thinking had developed via his own maverick pedagogical experiments.

<sup>&</sup>lt;sup>13</sup> IUH Book, viii

<sup>&</sup>lt;sup>15</sup> Farllones Institue brochure, 1974, p.3

<sup>&</sup>lt;sup>16</sup> Located near the town of Occidental in Sonoma County, the Rural Center operated until 1990. *Design for Life* XX-XX; Farallones Institute Newsletters 1974-1976

<sup>&</sup>lt;sup>17</sup> Design for Life, pp 53-54

<sup>&</sup>lt;sup>19</sup> Farallones Institute, 1984 Annual Report and Ten-Year Retrospective (Occidental: Farallones Institute, 1984).

<sup>&</sup>lt;sup>20</sup> Farallones Institute, 1984 Annual Report and Ten-Year Retrospective (Occidental: Farallones Institute, 1984).

<sup>&</sup>lt;sup>21</sup> along with the *New Alchemy Institute*, RAIN, etc ref.

A series of "Outlaw Builder" design studios for UC Berkeley's Department of Architecture aimed at injecting a hippie ecofreak ethos into design pedagogy—producing an "ecotecture" as he sometimes put it.<sup>27</sup> A 1971-72 studio called Making a Place in the Country saw students abandon the city to build for themselves a communal settlement in the woods. The immersion in collective hand-building—a mostly bricolage construction process including even salvaged chicken coops—focused Van der Ryn's mind on a kind of design bio-ethic: "the process of building a liveable situation in harmony with the setting and ourselves." He was also becoming more determined in his belief that the material demonstration of such an approach was vital:

People want to directly experience working examples of new environments for living, working, learning, One functioning small-scale experiment is worth a thousand plans, The tremendous popularity of alternative design information such as the *Whole Earth Catalog* and *Domebook, Mother Earth News*, etc., point up the incredible energy focused on finding alternatives to today's living patterns and design "solutions." <sup>28</sup>

Van der Ryn's professional "outlaw builders," in a subversion of the period's conventional professional design pedagogy, were developing craft building skills, ecological awareness, and a social responsibility geared toward producing just the kinds of living experiments brewed at the Farallones Institute.

In the next pedagogical iteration Van der Ryn's encouragement of the outlaw builder disposition evolved to a more direct modelling of an architecture focused on material and energy flows: the 1972-3 "Natural Energy Systems" studio built a so-called "Energy Pavilion as the final project." The studio positioned radical professional action as critical in an opposition to the exploitative consumption fostered by conventional design:

The architect must assume the responsibility of developing new patterns of energy, water and materials consumption. Instead of using environmental controls to correct errors in design, his designs must help to reintegrate man into the balance of the biosphere.<sup>29</sup>

This was revolutionary in 1972 when, it must be remembered, the term "sustainability" had not yet been coined, and oil prices, corrected for inflation, were low. There was no financial incentive to devise what Van der Ryn called natural energy living, rather, the counterculture's

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<sup>&</sup>lt;sup>27</sup> Sim, Design for Life; Greg's chapter, note applications for experimental houses at UC

<sup>&</sup>lt;sup>28</sup> Van der Ryn, untitled, *Outlaw Building New,* unpaginated (see Castillo Stickells chapter for more on Outlaw Building)

<sup>&</sup>lt;sup>29</sup> "Natural Energy Design" (unpaginated),

new ecological morality was its motive force. This is an important point to keep in mind (particularly when thinking about the subsequent development of the Integral Urban House): the 1973 'oil crisis' certainly gave it momentum but the Energy Pavilion project was more than simply a response to American anxieties about financial and energy security—it underpinned a new eco-design ethics.

## [Figure X. Energy Pavilion]

The Energy Pavilion was a rough and ready prototype for Van der Ryn's ideas of ecotecture—a tool for disentangling the house from the industrialised, polluting utilities networks of modern North America. To create the structure and its systems—and a new mode of design—students and faculty scavenged journals in a variety of fields for relevant readings. They compiled a reader—The Natural Energy Design Handbook—that brought together in its 300-plus stapled pages everything from Mother Earth News articles on water recycling and the Olkowski's composting advice, to Journal of the American Society for Engineering and Scientific American papers on solar energy and windmills. The database guided construction of the students' own experimental solar heating and storage systems, wind generation devices, rainwater collection and waste recycling systems, and greenhouse structures that would turn treated waste into a garden resource. These were combined in the Energy Pavilion's vaguely constructivist form as an attempted system of circular flows mimicking the regenerative performance of the biosphere itself. (Fig. X Energy Pavilion) The Pavilion modelled a set of domestic infrastructural systems imagined as scaffolding an environmentally harmonious self-sufficiency. It represented a prototype autonomous service core for the kind of rural ecotectural domiciles that the first Outlaw Builder studio had begun to experiment with. Supported by a scaffold and viewing platform built from salvaged timber, the pavilion was also a means to publicise and promote the possibilities for ecological design. Its time as a public demonstration device was short-lived (demolished by a disgruntled campus administration), but the experiment tested a range of systems, and ways of integrating them, that would reappear in the Integral Urban House.

## Back to the City

The IUH might have had its roots in a countercultural eco-architecture but it was also a corrective to a powerful countercultural momentum away from the city. The Energy Pavilion experiment, Van der Ryn's outlaw studios, and activity at the Rural Center all fit

with the counterculture's desire to escape a perceived urban deterioration, rampant consumerism, and a failing government and society, captured in its "back to the land" *cri de coeur.*<sup>30</sup> The IUH was by contrast an urban project and offered an important corrective to simplistic ideas about counterculture escapism—the back-to-the-land movement as the hippie version of white flight.<sup>31</sup> It sprang from a recognition that the city could not be ignored: an early memo from the Olkwoski's to the Farallones Institute Board argued it was important to: "design and test life support systems which conform to the omnipresent constraints of the urban environment."<sup>32</sup> Van der Ryn had also stressed in an earlier funding proposal that while some might view a closed ecosystem house design as an "escapist vision" its intent was "not a rejection of either cities or technology" but an attempt to "design in terms of the smallest coherent system, so we become aware and thus responsible for the effects of our actions."<sup>33</sup> Where Van der Ryn's pedagogical experiments had a real or implied rural setting (the Energy Pavilion was on campus but emphasised its autonomy from industrialised infrastructure networks), the IUH now proposed a grassroots urban habitation model that made interdependencies local and tangible.

The IUH sought to theatrically transform the energy and material flows of a corrupted urban system—advancing a dual material and social salvaging process. Helga Olkowski described its ambition as redeeming a house "that would typify the worst of American cities." The problem she saw was the city-dweller's lack of control over infrastructure that provided vital services and typically abstracted their relationship with the environment. By contrast, she positioned the IUH as a radical urban home makeover that could point the way toward Americans reconnecting with natural systems and rhythms in their towns and cities, while disconnecting from environmentally destructive, massively centralized industrial food and energy production systems. It became an architectural vehicle to alloy the Olkowski's style of small-scale and pragmatic city-based environmentalism with Van der Ryn's systems-based eco-design—integrating domestic food production, waste recycling, and water and solar energy collection. Given the ambition for the project's quotidian influence, the decision to retrofit the IUH, rather than demolish, recognised it would be a more relevant example to

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<sup>&</sup>lt;sup>30</sup> Timothy Miller, *The '60s Communes*; Daloz, *We Are As Gods: Back to the Land in the 1970s on the Quest for a New America*; *New Pioneers: The Back-to-the-Land Movement and the Search for a Sustainable Future*. By Jeffrey Jacob. University Park: Pennsylvania State University Press, 1997.

<sup>31</sup> Felicity? Ref? Outlaw Territories?

<sup>&</sup>lt;sup>32</sup> Memo – first concept undated, 1

<sup>&</sup>lt;sup>33</sup> Sim Van der Ryn, Ecotecture house proposal documents, 1973, Campe archive. 'Synopsis' 3-4.

<sup>&</sup>lt;sup>34</sup> Helga Olkowski quoted in Farming the asphalt jungle McBride, Stewart . The Christian Science Monitor; Boston, Mass. [Boston, Mass]04 Apr 1980. (access via proquest Central)

most people than a new build. To put concept into practice, in late 1974 the Farallones Institute acquired and began renovating a dilapidated 1896 house on the flats of West Berkeley. As the IUH project proceeded it continued to look from the street, essentially, like a cute little fix-up remodel. But the appearance was deceptive; it domiciled a radical revision of post-war American home values and practices.

Locating the IUH in the city enmeshed the project in a vigorous urban politics and a neighbourhood particularly receptive to its experimental ambitions. The area's alluvial soils were attractive to a group determined to model ecologically-based urban living, but equally important was cost: the house was cheap. West Berkeley was a marginalized area at that time and the house had most recently been occupied by a drug rehabilitation center. The Farallones Institute were not the only group drawn to the locale—the IUH was set amongst a clutch of communes and collectives that had sprung up in the Berkeley's flatlands during the late-1960s. Amongst the communal living and radical Leftist politics, activities such as organised anticonsumerist "food conspiracies" (to bypass supermarkets for wholefoods and organic produce) represented a radical rethinking of mainstream American politics and lifestyles. It was fertile territory in which to establish the Integral Urban House and its agenda for a radically reconfigured domesticity. The IUH mirrored the communes' adaptive reuse of turn-of-the-century bourgeois housing to create live-work incubators of countercultural innovation, but shifted the focus to ecological design experimentation. 

Living Laboratory

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<sup>36</sup> Ashbolt? http://mshhig.com/radical.php

<sup>&</sup>lt;sup>37</sup> These collectives' guiding ideas and practices borrowed liberally from the cultural crucible of the hippie movement in San Francisco, blending influences from the Free Speech, Civil Rights, Anti-War and Black Power movements, and infused with New Left, Marxist and other political ideologies. Examples include McGee's Farm, Red Star Rising, Village of Art and Ideas, Razzlesnatch, The Circus and Karl Marx's Magic Bus <a href="http://mshhig.com/radical.php">http://quirkyberkeley.com/gone-3-collective-communes-communal-collectives-and-counterculture-icons/</a> need better refs.

<sup>&</sup>lt;sup>38</sup> Their. <a href="http://mshhig.com/radical.php">http://mshhig.com/radical.php</a> Food Conspiracy was the term coined by members of the collectives in the late 1960s for their schemes to pool resources to buy food in bulk (and more cheaply) from farmers and small wholesalers and distribute it amongst themselves. It also came to describe the loose network of collectives suppliers themselves. <a href="https://www.sfgate.com/news/article/THE-REVOLUTION-WILL-NOT-BE-CATERED-How-Bay-Area-3304646.php">https://www.sfgate.com/news/article/THE-REVOLUTION-WILL-NOT-BE-CATERED-How-Bay-Area-3304646.php</a>

<sup>&</sup>lt;sup>39</sup> The city location and a salvage ethos allowed the IUH to more fully engage with an urban political milieu, but it wasn't without tensions. The marginal status of the area and its cheap property was because, at the time, West Berkeley was a predominantly African-American neighbourhood and this characteristic meant its inhabitants were denited credit by banks through a process termed "redlining." Design for Life, 47; Wollenberg, *Berkeley: A City in History* (UC Press, 2008) XX. Redlining is a term coined in the 1960s for the discriminatory practice of identifying (and mapping) areas where banks would avoid investments based on community demographics. See: Norton, William (2013). *Cultural Geography: Environments, Landscapes, Identities, Inequalities*. Oxford University Press. ISBN 978-0195429541.[page needed]

# The IUH became a pioneering amalgam of model home, communal performance, research instrument, and public education tool: a countercultural living laboratory.

While the Whole Systems Design idea built on the precedent of Van der Ryn's pedagogical experimentation (especially the Energy Pavilion's integrated systems) and the environmental activism of the Olkowskis, it was decidedly not, declared *The Integral Urban House*, "merely a collection of solar or energy-saving devices, or even a backyard garden to help save on high food prices." The house was intended as a means to actualise a bioethics, understood as: "a system of moral concepts that deal with the relationship of humans to all other living organisms[.]" More particularly, it was a vehicle to test the bioethics of Whole Systems Design, to model its interwoven technical systems and associated domestic practices for others and to motivate broader environmental change. The transformation of the rundown house went beyond providing a basic blueprint for healthier, cheaper city living through urban farming—it also embodied a radical vision for the house as an artificially constructed ecological system.

## Systems and Flows

Foregrounding the house as a compelling tool for materialising environmental change—immersed in reformed relations with each other and the natural world—the design approach was particularly marked by the popularization of ecological and cybernetic thinking in the period's environmentalism. High profile publications such as the Club of Rome's *Limits to Growth* report as well as influential countercultural journals such as the *Whole Earth Catalog* fuelled public awareness of human effects on ecosystems and the growth of a broader ecological sensibility. <sup>49</sup> This brought notions of system, cycle, network, and hierarchy (and the particular role of living beings in those structures) to the foreground in discussion of human-nature interactions. Sim Van der Ryn's countercultural design thinking was crucial to incorpriating this outlook within Whole Systems Design. The influence is captured in his graphic formulation of a crucial design issue: how to visualise the extended

<sup>&</sup>lt;sup>47</sup> IUH, p.43

<sup>&</sup>lt;sup>48</sup> IUH 45

<sup>&</sup>lt;sup>49</sup> Systems thinking provided a key bridge between between ecological science and environmentalism. Von Bertalanffy's system theory was foundational for Eugene Odum's notion of Ecosystem Ecology (Odum, E. P. (1967). *Fundamentals of ecology*. Philadelphia: Saunders) and permeated growing public debate from the 1960s regarding global environmental issues; seen, for instance, in the Club of Rome's "The Limits of the Growth" project or the career of Barry Commoner, whose dual role as both respected scientist and popular political leader exemplified the close relationship between the science of ecology and the budding environmental movement in post-World War II America.

relationships of a home's function within the biosphere? Sketches by Van der Ryn were the foundation for a number of diagrams in *The Integral Urban House* that represented the home as a constituent part of a broader ecological whole. Van der Ryn's diagrams adopted the Tibetan mandala form—channelling a hippie fascination with eastern philosophies and religions, as well as the buzzing detail of vision associated with hallucinogenic drugs.<sup>50</sup> The mandala as a visualization tactic was integral to countercultural concerns with an intertwined personal liberation and ecological holism.<sup>51</sup> The form was repeated and intensified in designer Gordon Ashby's drawings for Van der Ryn's "Ecotectural House" concept. Ashby's mandala-like renderings contrasted the "Tecno-Fantacy Household [sic]" of a high consumption, urban technocratic society with the autonomous ecological system of an "Ecotecture Household." Tom Javits (a student of the Olkowskis who would become the IUH manager) also made contributions to understanding the ecoenergetic flows on which the house design was based, through his work to diagram and calibrate all the associated "resource flows" of the house. 53 To do so, Javits turned to the "energetics" techniques of influential ecologist Howard Odum.<sup>54</sup> The aim was to establish a shared set of concepts and techniques regarding energy flows, to aid the synthesis of biological and architectural ideas a common language for the Farallones Institute's interdisciplinary group of house designers. Via mandalas and ecoenergetic thinking, the Integral Urban House's experimental model for ecologically attuned dwelling saw architectural elements, occupants, animals, soil, plants, bugs, food, water, faeces, urine—everything the designers could think to model— all treated as flows and transformers of energy.

#### The Integral Urban House

Every part of the house was incorporated into Whole Systems Design, from the front verge to the toilet cistern. The whole site became an integrated assemblage of (bio)technologies geared to harness and tune the various energy flows toward self-reliance. For example, the fabric of the house itself was implicated: south facing walls and windows were adapted to passively absorb solar energy during the day and radiate heat at night—tempering the indoor climate. Internally, the kitchen was redesigned with storage and work

<sup>&</sup>lt;sup>50</sup> A mandala is traditionally a spiritual and/or ritual geometric configuration of symbols, generally circular with balancing visual elements, symbolizing unity and harmony. In modern usage it has become a generic term for a cosmic diagram that shows human relation to the infinite, the world that extends beyond and within our minds and hodies

<sup>&</sup>lt;sup>51</sup> Sadler, "Mandalas or Raised Fists", *Hippie Modernism*, drawing on unpublished essay by Maitland.

<sup>&</sup>lt;sup>53</sup> the calculations are reproduced throughout the IUH book.

<sup>&</sup>lt;sup>54</sup> Farallones Institute newsletter Feb 1, 1975, p.1-2.

spaces allowing for bulk supplies3 and food processing. New technical systems were also incorporated: a wind power generator provided an electricity supply, while solar collectors and a wood water heating apparatus contributed to water heating and cooking activities. A solar oven on the roof terrace aided in cooking and food-preserving. Multiple composting systems (including a Clivus Multrum toilet) and grey-water recycling reframed waste as recovered resources for food production. The gardens themselves were designed fundamentally for that purpose—including raised beds for vegetable growing, fruit trees, an aquaculture pond, bee hive, and chicken and rabbit coops. More technical systems supported and integrated these processes—a greenhouse and coldframe extended growing periods, a hide tanning area dealt with the by-products of raising animals for consumption. Threats to the yields of the various food sources were addressed through Olkowski's expertise in "cultural, physical and biological" methods of pest management. The aim was to create an urban setting that would thoroughly cultivate sensitive and meaningful relationships between human, plant and animal life.

#### A Countercultural Domesticity

The integrated systems and revised practices at the IUH dramatically escalated the implications of domestic self-reliance—this was a model for a new, ecologically attuned mode of living turning its back on the industrialised consumerist systems underpinning daily American life. The IUH backyard makes clear the proposed shift. It operated as a radical counterpoint to that of the typical North American suburban home, which supported a postwar boom economy by serving as a platform for mass consumption (with family members as the fundamental unit of consumer practices). The IUH turned this equation upside down to make the home a primary site of both agricultural and energy production. For example, at the IUH the backyard pool wasn't for swimming, but for aquaculture; and the hallowed American front lawn lost its clipped regularity to became an edible alfalfa patch. The communal life of the IUH also critically revised postwar American home values and practices. In equating countercultural domestic reform with a metonymic recreation of broader ecological systems, the IUH redefined the residential collective as one in which

<sup>&</sup>lt;sup>55</sup> Helga Olkowski, "Self-Guided Tour to the Integrated Urban House, Farallones Institute, Berkeley, California", Farallones Institute, c.1975; Farallones Institute newsletter Feb 1, 1975, p.1-2. Some of these ambitions remained unmet: the windmill wasn't built, the house retained a conventional toilet to meet city codes and its connections to municipal water, electricity, gas and sewerage.

<sup>55</sup> Abstract of proposal to Build an Ecotectural House

<sup>58</sup> Ref here? Cross, An All Consuming Century; Cohen, Consumers Republic

"rabbits, chickens, fish, honeybees, plants, microbes, and people interact in a flourishing example of interrelated self-reliance"—an inter-species and inter-disciplinary commune. A stand of mulberry trees, for example, would be tended by the human inhabitants who would eat its fruit, and pruned by them to feed silkworms in the greenhouse; in turn, the silk could be harvested as insulation in quilted clothing and the pupae fed to the chickens and fish. <sup>59</sup>

The IUH also rejected the atomised, insular quality of the typical suburban home as a consumption unit. The testing of the house as an ecosystem was envisaged as just a first step in developing the "Integral Urban Neighborhood"—up-scaling and redistributing revelant life-supporting systems (such as composting, recycling or animal raising) into city-wide programs and redesigning the "interface areas" of the house and street for shared benefit "to the human and nonhuman community." In challenging "private possession-oriented" American society, the Whole Systems Design even foreshadowed the sharing economy: identifying unnessary waste in each household "owning their own complete household set of appliances" and arguing the community benefits of skill-sharing and collective living. 61 The IUH was pitched toward shaping a new social and political subject—by operating the IUH as a tool of ecological reconciliation, the resident would become a co-worker in life supporting practices such as organic food raising, and come to an understanding of what it means to live in symbiotic harmony with a life-giving biosphere. The idea of lifestyle activism may be more familiar now via critiques of an ineffectual, individualistic, consumer-led environmentalism but the IUH conjured an environmental lifestyle politics more focused on an active modification of everyday habits and infrastructures of circulation—replacing unsustainable practices and forging alternative flows. 62 The key though, to that project of eco-conscious self-reliance, was the urban dwelling—the Integral Urban House. The ability of architecture to provide an integrating spatial form was paramount. At the Integral Urban House the Farallones Institute's "Whole Life Systems" became "Whole Systems Design."

#### A Research Platform

The reshaping of American domestic life at the IUH was enacted through a unique research program. After the building renovation (directed by a group of Sim Van der Ryn's architecture students) a multidisciplinary stream of graduate students resided in the house and

<sup>&</sup>lt;sup>59</sup> McBride, Farming the Asphalt Jungle.

<sup>&</sup>lt;sup>60</sup> IUH 62, House and Street Chapter, Nieghborhood chapter

<sup>61</sup> IIIH 46-47

<sup>&</sup>lt;sup>62</sup> Refs: some example media. Ref: lifestyle politics, lifestyle activism (Marres?)

collaborated in research on ecosystem management. The house typically had three permanent residents and nine other employees, giving classes, lectures, tours, and collecting data from projects—led by Tom Javits as house manager. Research at the IUH meant participation in food production, waste management, energy generation processes and other aspects of domestic maintenance. The experiments operated across scales and interwove the testing of technical systems and behavioural change—ranging from a backyard aquaculture pond and beehive, flat plate solar collectors for water heating, a methane digestor and grey water recycling system, to composting kitchen scraps and capturing human urine for use as a plant fertiliser. These and other operations in the house were planned, documented, quantified and evaluated over years; the exorbitant energy budget of an ornamental lawn, for example, was carefully evaluated and contrasted with the productive capacities of an alfalfa patch, particularly its ability to feed humans and non-human residents. <sup>65</sup> (Fig. p.428 IUH Book) This made the IUH very different to experimental houses built by university research programs in previous decades (such as the MIT solar house series). 66 Apart from obvious distinctions in funding, status and personnel as an independent versus institutional research program, neither did it have a focus on the isolated testing of single technologies or materials. Rather, while they cultivated food, ate meals read books, washed and defecated the residents tested the bioethical systems of the IUH. In the performance of their domestic duties the human residents simultaneously operated the IUH as a laboratory in which to develop and refine the technologies that would allow humans to live as custodians of a healthy environment.

#### Hot-Rodded Eco-Living

The IUH was a model house and didactic setting for the communal bioethical lifestyle being forged by its researcher-inhabitants. As well as radically reimagining urban American life, it profoundly subverted the familiar post-war format for homes open to the public as domestic display environments. By the 1970s, display homes were typically being used to create a participatory consumer spectacle (of the type experienced, for example, in World's Fair exhibitions). Visitors would be introduced to a variety of modern architectural concepts, materials and techniques, as well as the most up-to-date home appliance technology. <sup>68</sup> These

<sup>&</sup>lt;sup>65</sup> Ref example of data in book.

<sup>&</sup>lt;sup>66</sup> Barber on Solar House. The student projects had more in common with the anti-institutional experiments Barber mentions (Dresser et al) but, of course, were buoyed by their institutional attachments.

<sup>68</sup> ref?? Colomina?

sites were fundamentally vehicles for showcasing the home as a platform for mass consumption. By contrast, the IUH and the unusual domestic routines of its researcherinhabitants proposed the post-war home as a new platform for appropriate technologies, voluntary simplicity, ecological balance and small-scale domestic production—showcased in its approachable, hand-crafted architecture, the tasty bounty of its gardens, and a comfortable interior environment achieved through low energy and passive design techniques. Householders, though, couldn't simply purchase a set of appliances and plug them in to achieve ecological harmony. They would need to be reskilled to operate the machinery of a newly environmentally-tuned everyday life and become, as the IUH designers argued, "an active and intelligent participant in managing, maintaining, and adapting the dwelling."<sup>69</sup> Tom Javits would regularly end a house tour by breaking an alfalfa-fed rabbit's neck in front of the crowd – to drive home the point about what self-reliance in food production might require of the new eco-citizen.<sup>70</sup> Javits' actions point to the way the IUH was a display home in which its researcher-inhabitants gave an extended (sometimes provocative) performance of DIY lived ecology. It domiciled the modelling of possible future ways of living that people could adopt in order to derive new modes of satisfaction and meaning:

The "hot rod" is one example of an aesthetic that grows out of the young American male's attempt to find meaning in everyday industrial culture. Maybe the day is not too far off when millions of Americans will be "hot rodding" their now denatured houses into finely tuned, multichannelled, closed-looped, organic instruments for processing nature's flows.<sup>71</sup>

Thus, the house functioned not only as design experiment and research lab but as a public pedagogical tool—a platform advocating for "hot rodded" eco-living. It was an "exhibitionist house" in Beatriz Colomina's terms, offering a polemical proposition about the reorganisation of domestic space. The IUH, however, advertised a countercultural not commercial domesticity.<sup>73</sup>

#### Mediating Integral Urban Living

The visibility and influence of the IUH grew dramatically during its lifespan, as its operation as a living laboratory—its research and demonstration of systems and practices for

<sup>&</sup>lt;sup>69</sup> IUH book 35.

<sup>&</sup>lt;sup>70</sup> Javits interview? Olkowski?

<sup>&</sup>lt;sup>71</sup> IUH p.35

<sup>&</sup>lt;sup>73</sup> Beatriz Colomina, 'The Exhibitionist House', in R. Ferguson (ed.), At the End of the Century: One Hundred Years of Architecture, Harry N. Abrams, 1998, p. 151

ecologically integrated domesticity—were mediated in myriad ways. The Farallones Institute energetically pursued a vision for expanding the IUH's relevance and influence to reach a broad, mainstream audience and to generate a public engaged with the urban ecology movement. In the mid-1970s hundreds of people per week (including school, college and community groups) attended open classes on topics such as solar energy systems, habitat design and waste recycling. They could also take guided tours of the house and its systems. At the same time, formal degrees in ecosystem management and environmental science could be pursued under the direction of the Olkowskis and based in activities at the house. <sup>74</sup> A professional consultation service was even offered for those wanting to modify their own homes. In connection with that service, the house became part of the Briarpatch Network (a loose affiliation of Bay Area businesses pursuing "right livelihoods") and promoted as an "owner builder school." Beyond the operations centred on the house itself, the Farallones Institute produced an influential publication. The 1979 Sierra Club book *The Integral Urban* House: Self-Reliant Living in the City, was critically important to the broader public awareness of the project. It incorporated considerable amounts of data and personal experience gathered by the IUH designers and inhabitants, along with plans and other evidence of the project's ecological design innovation. <sup>76</sup> Running to multiple editions and nominated for a National Book Award in 1980, The Integral Urban House functioned simultaneously as design treatise, research report and Do-It-Yourself manual. The house was also the subject of curious scrutiny and analysis, including hundreds of book reviews, interviews and profiles in mainstream newspapers and magazines across North America and internationally, as well as lengthy scholarly articles in specialist journals.<sup>77</sup> The remarkable extent of the popular mediation of the IUH project is registered by the twelve-page fullcolour article on the house in high-profile mass-market publisher Time-Life's Gardening

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<sup>&</sup>lt;sup>74</sup> Antioch College West UG Ecology Program and MS program in Ecosystem Management, as well as classes in food-raising at UC Berkeley.

<sup>&</sup>lt;sup>75</sup> Like the Farallones Institute, the Briarpatch Network was initially supported by the Portola Institute. The idea of the Briarpatch is attributed to Dick Raymond (founder of the Portola Institute), who envisioned the demise of large corporate "dinosaurs" and the emergence of a new "subsociety" of small-scale, cooperative, "joyful" entrepreneurialism. *The Briarpatch Book: Experiences in right livelihood and simple living* (San Francisco: New Glide Publications; Reed Books, 1978), vii-ix. See also: <a href="https://people.well.com/user/mp/briars.html">https://people.well.com/user/mp/briars.html</a>
<sup>76</sup> Rook ref — mention no. of editions. Also note Olkowski's City People's Guide to Growing Food — emerges around

<sup>&</sup>lt;sup>76</sup> Book ref – mention no. of editions. Also note Olkowski's City People's Guide to Growing Food – emerges around the same time.

<sup>&</sup>lt;sup>77</sup> A small example of the range of attention: Brower, Kenneth. "The Urban Farm." *The Atlantic Monthly* (1971-1981) Jan 1978, Vol.241(1), p.58. Orr, David W. "Abundance and American Democracy: A Comment." *The Journal of Politics* 44.2 (1982): 388–393

<sup>&</sup>quot;Home, Integral Home." *The Observer (1901-2003)* 24 Aug. 1980. Crouter, Ann C, and Garbarino, James. "Corporate Self-Reliance and the Sustainable Society." *Technological Forecasting & Social Change* 22.2 (1982): 139–151.

Yearbook for 1978. By contrast, a noticeable absence of attention from architectural publications highlights the resonance of the IUH as lifestyle experiment rather than authored design exemplar (Van der Ryn himself was published regularly in journals such as AD and Progressive Architecture but the IUH very rarely featured). Through all this activity—from classes and tours, to degree programs and publications—the IUH became an vibrant experiment in translating and communicating the integration of an ecological consciousness into everyday life. The deployment of the IUH as a device for public involvement framed a new environmental citizenship keyed to broad issues of resource depletion, pollution, public health and ecological consciousness, but enacted through the transformation of domestic habits.

#### The IUH and Bay Area Environmentalism

The Integral Urban House made a vital contribution to environmental activism and experimentation in the Bay Area via its influentia proposition for a new lived ecology. Rather than a simple design blueprint, it offered an assemblage of adaptable concepts, technologies and practices that were developed through its experimental dwelling process. It embodied, in Davina Cooper's terms, an everyday utopianism in which conventional activities were enacted in unusual ways; that is, it was a determined attempt to perform daily life differently, through a contingent process rather than realised ideal. 87 In this mode, at the IUH the practical was often taken to the extreme—captured in processes such as the detailed energy modelling of an alfalfa patch to determine its capacity for livestock feed, recycling of human urine as fertiliser, and gleaning of dead bees as fish food. Thinking of the publicly performed experimental domesticity of the IUH as a normalisation of utopian social dreaming helps us to understand what was at stake in such a countercultural living experiment. Through its everyday utopianism, the IUH took seriously the transformative possibilities latent in everyday efforts. It also became part of a broader, collective assertion of Berkeley as a "free space," where new ways of life and new forms of politics could materialize. 98 99 It particularly contributed to an increasingly prominent environmental activism amongst a regional network of communal liberated spaces.

To discern the ecotopian quality of Bay Area environmentalism in the 1970s, and the marked contribution of the IUH, it will help to rehearse some the of the critical strands in the

<sup>&</sup>lt;sup>98</sup> Given substance through battles over space and community, from the Free Speech Movement to People's Park. Free Speech ref, Peoples Park ref Ashbolt ref.

<sup>99</sup> Ashbolt, A Cultural History of the Radical Sixties in the San Francisco Bay Area,

development of its distinctive countercultural eco-activism. The San Francisco Bay Area had been a key node during the 1960s for the national campaigning and networking of a powerful and broad environmental movement. 100 By the end of the decade, though, a more radical, everyday intertwining of ecology and politics had arisen. 101 The People's Park insurrection (so important to Sim Van der Ryn's personal radicalisation) became especially emblematic of a process whereby Berkeley, as a liberated space, foregrounded ecological issues. 102 A contributor to the journal *Liberation* declared at the time: "The park has brought the concept of the Whole Earth, the Mother Earth, into the vocabulary of revolutionary politics," while the Berkeley Tribe's Blueprint for a Communal Environment claimed: "People's Park was the beginning of the Revolutionary Ecology Movement." At the same time, the Diggers the prominent Haight-Ashbury-based community-activist group—were decamping from the city, following their pivotal 1967 "Death of the Hippie" ceremony. As a "statement of vision and intent for this exodus," key Digger Peter Berg issued the broadside "Homeskin," which declared a need to embrace the natural interdependence encountered in the Earth's biosphere: "any place in this spinning geo-creature earth is part of the skin that grows us all." <sup>104</sup> In developing its own form of anti-materialistic and increasingly earth-centered activism, the IUH—as an ecological commune—figured as a potential tool for in such a struggle.

The IUH wasn't alone—it formed part of what Castillo has identified as a Bay Area "freak enterprise" zone in wich new ecological subjectivities emerged. Alongside the Farallones Institute, dozens of small eco-activist groups operating in the Bay Area were becoming, as a New York Times Magazine article put it in 1970, more "brash" and "radical" in their style. The activism and experimentation of Berkeley's Ecology Action (which had direct links to the Farallones Institute) was a prominent and intense example. Founded by Cliff Humphrey in 1968 and living out their principles in a south-Berkeley commune (the "Life House"), Ecology Action advocated the need for a complete "cultural transformation,"

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<sup>&</sup>lt;sup>100</sup> the Sierra Club's membership reached 100 000 in 1970 (triple its 1965 figure) and had extended its chapters to 50 US states (Belasco 1993; Gottlieb 1993; Rome 2003; Rothman 1998; Sierra Club) On 1960s US environmentalism see, e.g Gottlieb 1993, Belasco 1993, Rothman 1998, Rome, "'Give Earth a chance'..." 2003. On the growth of Sierra Club, see: Sierraclub.org/about accessed 30.03.16;

<sup>&</sup>lt;sup>101</sup> EUGENE N. ANDERSON, Jr, "Radical Ecology: Notes on a Conservation Movement" Biological Conservation, Vol. 4, No. 4, July 1972: 285-291

<sup>102 (</sup>Ashbolt: 17), also Anderson, "Radical Ecology: Notes on a Conservation Movement" 1972

<sup>&</sup>lt;sup>103</sup> "... just the beginning" in *Movement toward a New America,* ed. Goodman, 1970, 509; Blueprint in Roszack, Sources

<sup>&</sup>lt;sup>104</sup> "Homeskin" Planet Drum Broadside, 1970, reprinted in Peter Berg, *Envisioning Sustainability,* (Subculture Books, 2009) 41-42.

<sup>&</sup>lt;sup>105</sup> The Better Earth

<sup>&</sup>lt;sup>106</sup> in 1971 Olkowskis worked with Ecology Action to develop the West Coast's first community recycling centre. *Bay Area Living* articles, 1971 [PDFs]

a move away from the ideals of growth consumption and progress: "if we continue this way we'll run the life-support system down to zero. Survival can't be voted into existence, it has to be lived." This attitude exemplifies the milieu in which the IUH was formulated and made such an influential contribution—a countercultural environmentalism was being connected with personal liberation in the face of corporate capitalism, as well as a way to save society and the planet. <sup>108</sup>

The IUH also shared and informed the growing concern for the eco-political implications of the everyday. Ecology Action, for example, pursued projects that emphasized the creation of alternative, countercultural institutions and practices (such as organic buyers' clubs and recycling centres), and deployed guerrilla theatre tactics (such as a "Smog-Free Locomotion Day" parade including a car engine in a coffin on wheels). Their rethinking of lifestyle and consumption practices directed particular attention to the home and the impacts of its material and energy flows – projecting material actions, like heating, cooking and washing, as a way of engaging with an assortment of issues, from environmental pollution and resource depletion to consumerism and centralized industrialization. Other environmental organisations were becoming similarly focused. The San Francisco Ecology Center was founded in early 1970 (the Olkowskis playing a key role) with a focus on public interest campaigning. However, from around 1973 its attention turned to the everyday: "quality of life, nutrition, understanding the city, education, simple living" and the "right livelihood" of the centre itself. The IUH joined these organisations in exploring the intimate connections between personal experience, material actions and larger social and political structures.

The IUH was an influential model for ecological activism within the Bay Area's countercultural environmentalist milieu. The Berkeley-based "Urban Ecology" group started up in 1975 (initially as "Arcology Circle"), its activist and architect founders keen to apply Paolo Soleri's "arcology" concept to transform existing cities. However, the group's efforts to develop a mode of ecological city planning quickly came under the influence of the Farallones Institute's work. Urban Ecology, as founder Richard Registers, recalls: "[...]were

<sup>107</sup> The Better Earth p.53

<sup>&</sup>lt;sup>108</sup> See Charles A. Reich's well known, optimistic 1970 take on this: *The Greening of America* "There is a revolution coming..." p2-3

<sup>&</sup>lt;sup>109</sup> The Better Earth p.54; Jundt, *Greening the Red, White and Blue*, ch. 4(?) "Striking Back at the Goddam Sons-of-Bitches"

<sup>110</sup> Ref – Ecology Center founding (Olkowski records)

<sup>111</sup> It became involved in high-profile legal action against an expansion of San Francisco Airport (Briarpatch 1978: 204-209)

<sup>112</sup> Register, Ecocities, 232-234

great admirers of the Integral Urban House. We proposed to take the next step with the Olkowskis and others by creating an 'Integral Neighborhood." As well as an intellectual beacon, the IUH was simultaneously a space for bringing an activist community together: Urban Ecology held their first conference—"The City, the Garden and the Future"—at the IUH in 1980. 114 The IUH's performative inhabitation and the co-extensiveness of its ecological and political imperatives also chimed with an expanded, fluid set of activist art and design practices that sprang up in the pluralism of the 1970s' Bay Area scene. 115 A keeey example is Bonnie Ora Sherk's ambitious *Crossroads Community (The Farm)*, cofounded with Jack Wickert and begun in 1974, which drew directly on the IUH in its conception and form—seeking to, in part, emulate the role of the IUH as a platform for creating ecologically sensitive relationships between humans, animals, plant life and their urban habitat. 116 The influence on Sherk's urban farm project points clearly to the critical contribution of the IUH in asserting an architectural underpinning to the new forms of living "well" being enacted by the Bay Area' countercultural environmentalism scene and the tangible model it offered for potential wider uptake.

#### Conclusion

In the introduction to the *Integral Urban House* the authors proclaimed their aim of: "joining our professional skills to create dwellings that would translate into physical form the central principles of the emerging environmental movement." That movement was a countercultural eco-activism blossoming in the Bay Area – an everyday environmentalism focused on lived ecology and the remaking of domestic practices understood as imbricated in larger human and non-human systems. The IUH eventually held significance beyond its participation in that scene, though.

In 1978, the former Digger Peter Berg published "Reinhabiting California," a seminal text for an emerging bioregional thinking that argued the vital importance of "reinhabitation"—a learning to "live-in-place" requiring a society to "keep a balance with its region of support through links between human lives, other living things and the processes of

<sup>&</sup>lt;sup>113</sup> Register, Ecocities, 233.

<sup>&</sup>lt;sup>114</sup> Ecocities, 233. Participants included Paolo Soleri and Ernest Callenbach.

<sup>&</sup>lt;sup>115</sup> (Black Sun 20, 28); State of Mind, 168-177. For example: Sim Van der Ryn's sometimes-collaborators Ant Farm highlighted air pollution in their notorious 1970 Clean Air Pod installation at UC Berkeley's Sproul Plaza—an inflatable toxic-air escape zone into which gas mask-wearing attendants marshalled unwitting students (Lewallen and Seid, Ant Farm 1968-1978, p.15).

<sup>116</sup> Blankenship, "The Farm by the Freeway" West of Center, 42-55.

the planet—season, weather, water cycles—as revealed by the place itself." 122 It echoed the Farallones Institute's ideas of Whole Life Systems and the Whole Systems Design employed at the Integral Urban House, but its also comprehended and stressed the critical importance of regional scale, with the region understood as a "geographical terrain and a terrain of consciousness." <sup>123</sup> In the same year, *The Integral Urban House* book was first published and its closing sections on "The House and the Street" and "The Integral Urban Neighbourhood" acknowledged the importance of such multi-scalar thinking—reaching to connect the domestic model of the IUH with street, block, municipality, city and region. Sim Van der Ryn, through his 1977 appointment as State Architect was already at that time working to expand the reach of the ecological design thinking that had underpinned the IUH. His establishment of the California Office of Appropriate Technology in the State Architect's Office was pivotal—it would go on to institutionalise countercultural eco-design concerns via its work on building code legislation, environmental standards, public education programs and economic subsidy (where Peter Berg was employed to study how bioregions could be the basis for renewable energy systems). 124 The Olkowskis continued to try to establish an Integral Urban Neighbourhood in collaboration with Urban Ecology, while in 1976 Helga Olkoswki also became a board member of the National Center for Appropriate Technology (NCAT). In 1979 the couple founded the Bio-Integral Resource Center, whose office was located on the first floor of their residence. Meanwhile, at the Farallones Institute's Rural Center, the knowledge garnered at the IUH was a critical component in continuing to develop the concept of "Whole Life Systems." And the Center's building, educational and outreach programs would eventually involve many thousands of people and extended to training the US Peace Corps, and other service agencies in Africa, Latin America, and Asia. 125

By the time the IUH was finally closed in 1984—the Farallones Institute deciding it could no longer afford the running costs—the house had made a vital contribution to environmental activism and experimentation in the Bay Area and beyond. Much more than a technical prototype, the IUH formed an influential experimental locus for communal encounter, public education, design research and a performed ecological domesticity—a demonstration of architecture's potential engagement in an urban environmental movement

<sup>122</sup> Berg and Dasmann, "Renihabiting California" reproduced in Berg, *Envisioning Sustainability* 81-88 (quote p.81)

<sup>123</sup> Berg and Dasmann, 81(?)

<sup>124 (</sup>see Gaglio chapter)

<sup>&</sup>lt;sup>125</sup> Farallones Institute, *1984 Annual Report and Ten-Year Retrospective* (Occidental: Farallones Institute, 1984).

and a site for material participation in eco-politics. Its own living laboratory model couldn't be easily sustained, but its effects had rippled outward from the productive gardens and solar panels that caught the eyes of passers-by, the multiple editions of *The Integral Urban House Book* and the appearance of the house in nation-wide popular Time-Life publications, to the wider institution building and public advocacy of its designers. Less an architectural progenitor and more a cache of adaptable concepts, technologies and practices, as the house itself was mothballed those closely involved continued to explore and scale up the ecological design thinking at its core. The Integral Urban House closed, but its effects multiplied.

<sup>i</sup> Bill Olkowski blog 2011