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## Demedicalize Architecture



Kayt Brumder, *Breathing Room*, thesis project at The Cooper Union, New York, 2009. [© Kayt Brumder; all images courtesy of the Canadian Centre for Architecture]

We live in a state of pervasive anxiety. Every day we are confronted with environmental problems: the energy crisis, pollution, decreasing biodiversity, climate change, new epidemics, the externalities of industrial production and consumerist lifestyles. We perceive our bodies as constantly at risk (from sources difficult to pinpoint) of contamination and disease. This increasing concern and obsession with health and well-being, mainly among urban populations in the West, is triggering an inevitable process of medicalization; ordinary problems are increasingly defined in medical terms and understood through a medical framework. [1]

We are so carried away by the idea of health that we have created a new moralistic philosophy: healthism. [2] Health is no longer identified primarily with the absence of illness, but with a state of general well-being concerning all types of functioning, from physical and biological to social and cultural. Nevertheless, our ambition for total well-being is fragmented and parcelled out through disconnected policies and actions. The production of a healthier body to withstand (inevitable) deterioration is today achieved through voluntary biomedical interventions and individual efforts (“staying in shape”), supported by new [environmental urban planning policies](#).

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Contemporary architecture and urban planning seem to address uncritically the conditions and context

in which [this discourse on health is developing](#). In most cases, the design disciplines rely on an abstract, scientific notion of health, and very literally adopt concepts such as “population,” “community,” “citizen,” “nature,” “green,” “development,” “city” and “body” into a professionalized, disciplinary discourse that simply echoes the ambiguities characteristic of current debate. Practitioners also ignore the fact that economic processes are closely intertwined with environmental processes, and especially that concepts of the body, health and sickness are products of history, politics, economics and culture. To properly “diagnose” urban problems, we must not speak of health in abstract terms, but rather of various ideas and states of health. As Jonathan M. Metzler has noted, “‘health’ is a term replete with value judgments, hierarchies and blind assumptions that speak as much about power and privilege as they do about well-being. Health is a desired state, but it is also a prescribed state and an ideological position.” [3]

The [book](#) and [exhibition](#) *Imperfect Health* do not represent a comprehensive survey of the relationships between health, architecture, cities and the environment. On the contrary, we mean to highlight some of the uncertainties and contradictions present in ideas of health and health care that are emerging in Western countries today, particularly in Europe and North America.

### **The City as a Body**

The metaphor of the *city as a body* consisting of various functional organs has long been present in the discourse on architecture and the city, particularly as established by the work of sociologist Richard Sennett and architectural historian Manfredo Tafuri. [4] In the 19th century, the city’s ill body was the object of surgical transplants, such as green lungs — [city parks meant to play a purifying, hygienic and educational role](#). Stagnant air, associated with odors and miasmas, was considered a primary cause of illness and infection. Air circulation had to be reactivated by means of incision into urban tissue: carving out wide, straight streets. These new arteries formed a continuous system of air circulation and traffic flow, eliminating obstacles such as the overcrowded slum, with its inner courtyards and blind alleys. Other metaphors followed over time, along with a continuous shifting of paradigms and values; Michael Hebbert observes that the seemingly healthful solution of corridor-like streets was soon perceived as the source of multiple urban ills. [5]

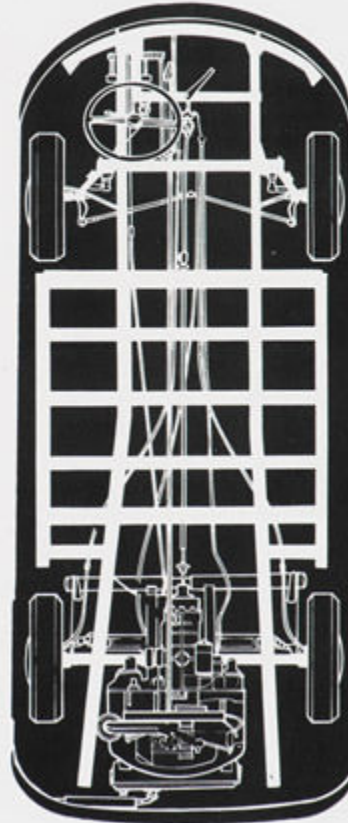
*An Organism*  
*Bone Structure*



*A City*  
*Street Structure*



*A Mechanism*  
*Frame Structure*



Oswald Mathias Ungers, *City Metaphors*, 1976. [© Ungers Archiv für Architekturwissenschaft UAA]

Today, the regeneration of the urban “body” is enacted via new “medical” techniques and procedures. The medical metaphor of tissue regeneration has replaced that of surgery. Normal tissue, represented by buildings and urban hardscape, has become the focus of aesthetic and therapeutic treatment. “Green” is thought of as a diffuse and continuous salve-like surface application, a new skin of vegetation that replaces or envelops exposed (manmade) surfaces and especially buildings. Façades and roofs are re-naturalized by the application of a thin epidermal layer of plants, selected to increase biodiversity. Façades become adaptive, even reactive, able to reflect changes in the surrounding environment and interact with it; [they assume a restorative role by drawing off airborne particles and dust](#). The city’s damaged tissue — polluted areas and landfills — is subject to medical treatments like purification, remediation and reclamation. By assimilating “green,” the built environment aspires to an ideal body, or at least a body in good health. The presence of green is seen as an antidote to problems caused by an urban lifestyle, increasingly considered “unnatural” and therefore harmful.

The contemporary green city is quite different from the modern city and the 19th-century city, which were dominated by an apparent need to protect the urban world from illness and natural hazards through a process of “sterilization.” Already in the 18th century, this defensive attitude toward the dark side of nature was present in the paving of streets, which not only guaranteed better road conditions but also protected against noxious miasmas rising from the earth. The same attitude was reflected in the hygienic zeal of 19th- and 20th-century engineers who determined asphalt to be the perfect insulating material for this purpose, and used it not only for road surfaces but also for roofs and gardens. For modern engineers the ideal city was a hermetically sealed, hygienic, black asphalt surface; for modern planners it was a green city punctuated with greenbelts, green wedges and corridors and greenways; for modern architects it consisted of lifted white buildings clearly separated from the “natural ground,” considered “a dispenser of rheumatism and tuberculosis” and “the enemy of

men.” [6] This may be contrasted with the view of contemporary bio-philic, who regard the entire city as an expansive green surface indistinguishable from nature, which no longer surrounds the urban but rather is completely amalgamated with it.

In her book *Emerald Cities*, urban planner Joan Fitzgerald has demonstrated how cities can modify their urban policies and economies by confronting environmental problems and seeking new conditions of development. [7] The “green” Fitzgerald argues for is not merely a superficial fabric but instead a deeper and more critical approach to ecological thinking. Like an emerald, it consists of a “green structure” which takes social conflicts into consideration and brings back into discussion the economic processes underlying environmental change.



Patrick Blanc, *Vertical Garden (Mur Végétal)*, Rue d'Alsace, Paris, 2008. [© Patrick Blanc]

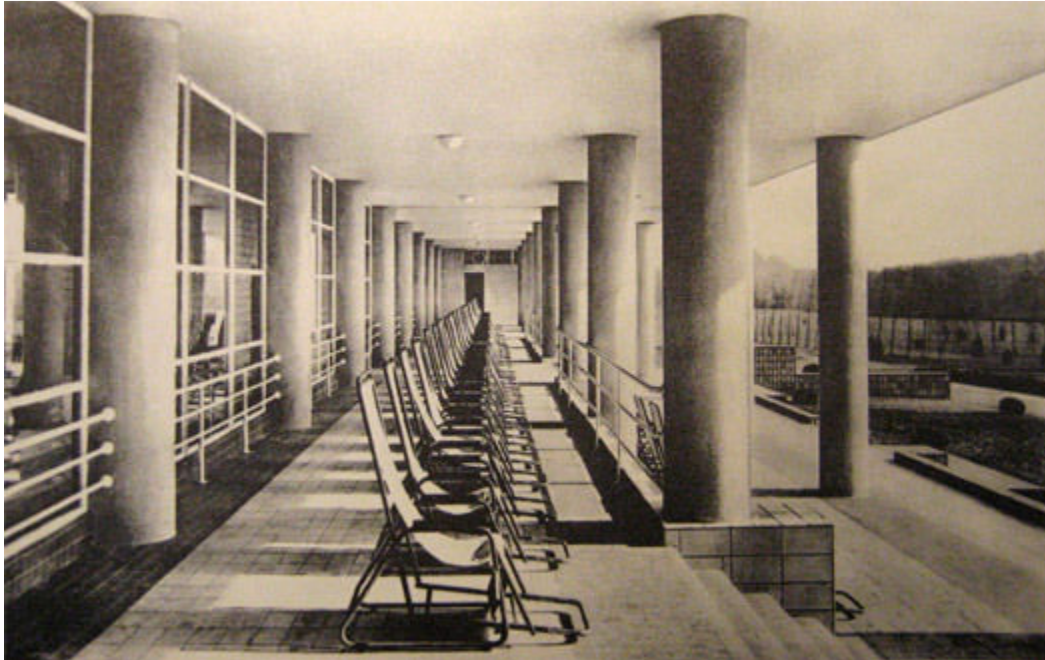
### **The City as a Cure**

Today we live in a new historical-environmental context, in which the antagonism between the purity of nature and the contamination of the city have been brought to a crisis: “The long history of creative destruction on the land has produced what is sometimes called ‘second nature’ — nature reshaped by human action. There is now very little, if anything, left of the ‘first nature’ that existed before humans came to populate the earth.” [8] According to David Harvey, we now inhabit this second nature, an environment profoundly marked by human presence and, as a result, by creative destruction. To take “refuge in nature” is no longer a plausible option; and yet there remains uncertainty not only about the healthfulness of life in the open air but also about the comforts of protected, enclosed space.

The [Healthy Cities](#) project, under the auspices of the World Health Organization, was initiated in Western Europe in the mid-1980s. The project — based on the belief that the dysfunction of cities and inequality of access to health care can be remedied by science, rational planning, education and community participation — met with instant success and spread rapidly. Still, as sociologists Alan Petersen and Deborah Lupton emphasize, the basis of this initiative remains the modern notion of the city as a sick body in need of healing. [9]

Today the (post-industrial) city may be considered an agent capable of delivering its own medical treatment. [As journalist Andrew Blum has noted](#), “Recognizing (however counter-intuitively) that cities may be the lightest way to live on the land (for the vast majority of us, at least) is inherently difficult.” [10] Yet the contemporary city seeks to be healthy in all its parts; consequently undergoing change, it changes its inhabitants in turn. The majority of projects aimed at transforming the relationship between environment and health not only take place in the city but are achieved by means of the city’s structure — its density and critical mass. Walking, using public transit, riding a bicycle,

growing food through vertical farming and other urban agriculture techniques, and aging in place: these are but a few such actions. New tools and approaches to urbanism demonstrate that the city is not only a place of concentrated social, environmental and health problems, but also an instrument of well-being. Examples include the Berkeley Institute of Design proposal by Ryan Aipperspach, Ben Hooker and Allison Woodruff for domestic restorative environments which relieve stress and problems related to the pervasive use of technology [11]; Toronto's [Responsive Architecture Lab](#), which studies how diffuse technologies can generate a better environment for human health; Nan Ellin's "Path Toward Prosperity" [12]; and [New York City's Active Design Guidelines](#), [13] promoted by Mayor Michael Bloomberg.



Recovery gallery, Clairvivre Sanatorium, Dordogne, France. [Photo from 1937 pamphlet, Prévoyance Sociale, Brussels]

### **Therapeutic Architecture**

Open-air schools, social housing, vacation residences, hotels, gyms, parks, productive gardens, beaches and swimming pools: The architecture of the first half of the 20th century produced a new set of typologies, or reformed existing ones, in the name of sunlight, air, water and nature — elements that embody modern ideals of health and hygiene. As noted by historians Paul Overy and Beatriz Colomina, and by Margaret Campbell in her essay for *Imperfect Health* [14], many of these new buildings included features, such as large windows and terraces open to nature, that first appeared for therapeutic purposes in early sanatoria. Modern architecture was predicated on ideas of health and medical practices that developed as a result of illnesses like tuberculosis.

In reality, sanatoria did not offer a truly effective therapy. Historian Dorothy Porter has noted that 85 percent of patients released from English sanatoria eventually died of tuberculosis, which was defeated years later with the introduction of vaccines and antibiotics. [15] The role of the sanatorium was to prevent the spread of contagions by isolating patients and eventually preparing them for the return to normal life. Thus the new buildings and their open spaces exemplified modern architecture's strength in configuring space that was "symbolic," if not actually curative, for the new man of the 20th century. It was in this new aesthetic that European social democracy found its mode of representation.

At present, many designers and architects work with "second nature" materials, which may include degraded or altered natural elements that can no longer produce the pristine architecture imagined by the moderns. All this dust, refuse and contaminated soil provides [new materials for conceptualization, elaboration and use](#). Today's design strategies involve a double reclamation that on the one hand repairs the environment and contributes to the responsible use of a region's resources, and on the other assigns a new therapeutic function to architecture, urban planning and landscape, widening the design fields to include variables previously assigned to public health. This therapeutic function can be achieved by means of sophisticated architectural solutions, such as the façades that absorb urban dust in Kayt Brumder's project *Breathing Room*, or buildings with forms that evolve along with a polluted

urban landscape, as in François Roche's project *Dustyrelief F/B-mu*.



R&Sie(n) (François Roche, Stéphanie Lavaux, Jean Navarro), *Dustyrelief F/B-mu*, Bangkok, Thailand, 2002. [Photo by François Lauginie; courtesy of the Collection FRAC Centre, Orléans; © R&Sie(n)]

In New York City's *Active Design Guidelines*, specifically-sited stairs and corridors aim to stimulate the everyday physical movement sedentary bodies need in order to combat obesity and prevent the loss of muscle mass due to aging. These spaces also serve to connect a building's users socially. As hospital design expert Roslyn Lindheim demonstrated in the studies she conducted with epidemiologist Leonard Syme in the 1980s, those who become sick most easily or fall into a high-risk category when subjected to high levels of stress are "[in some way 'out of connection' and lack meaningful social and natural connectedness.](#)" [16] Stairs and corridors not only encourage fitness but also provide preventive measures with respect to illnesses caused by social isolation and under-stimulation.

Certainly there are potential positive health effects from an ambitious, widely scoped design approach. Yet by accepting a potentially therapeutic role, architecture and urban design become integrated into a public health policy regime that requires that individuals take responsibility for themselves. With regard to obesity in particular, architecture is an active participant in a new training regimen that locates the body at the center of a series of processes of control and transformation, all in the name of a new culture of risk reduction and management. In other words, architecture's function in various therapeutic programs is itself strictly prescribed.

### **Fit Buildings/Fat Buildings**

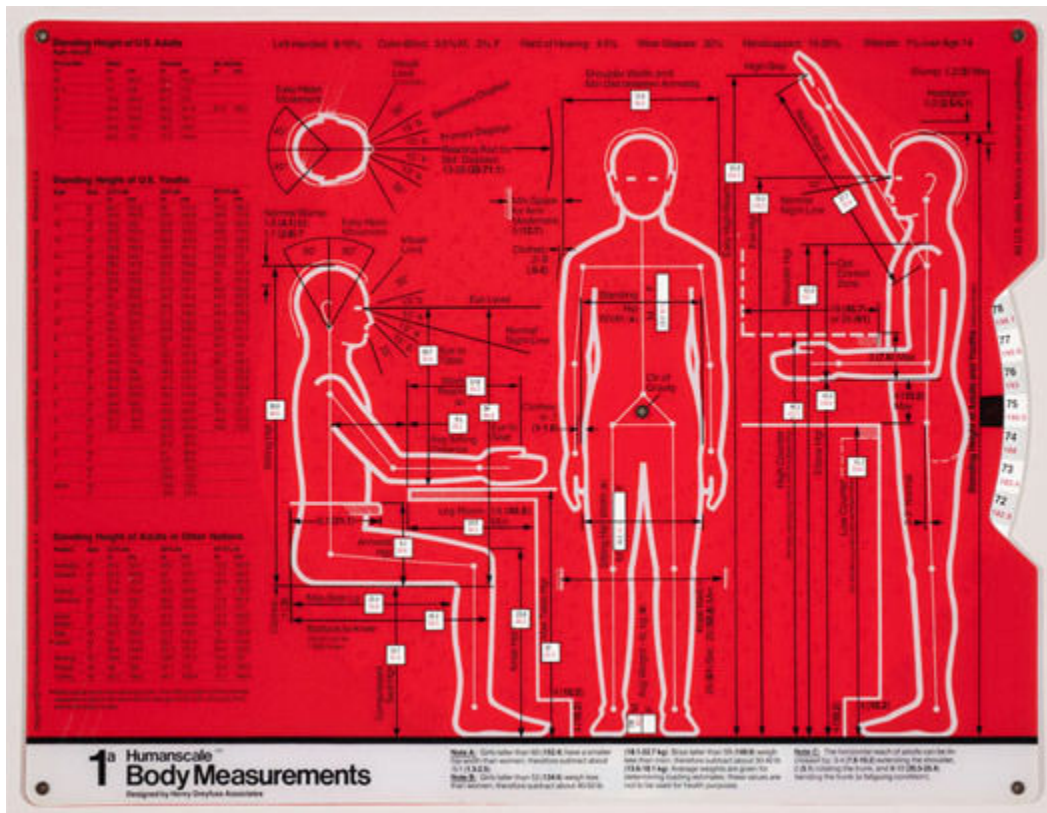
Not only our bodies but also the buildings we inhabit must be healthy. According to *The Smart Growth Manual*, a healthy building should be made of suitable materials with low volatile organic compounds, and be equipped with an adequate ventilation system. [17] It should protect us from radon emissions and water infiltration and prevent the formation of humidity. These standard precautions are an extension of the modern idea of a hygienic, sanitary building in which new materials and equipment are analogous to connective tissue or a medical prosthesis.

Moreover, contemporary buildings are challenged to be not only healthy but also fit. A fit building is one that keeps us in shape, training us to adopt healthy behaviors — taking the stairs instead of the elevator, for example. As designer Marrikka Trotter observes, in [an article in Harvard Design Magazine](#), these choices favor a certain group of users but cause difficulties for others; a fit building presupposes that its users have an adequately trainable body, or they will suffer exclusion from its spaces. Thus while architecture already produces spaces to meet the requirements of an aging or handicapped population, in a radical paradigm shift it is also reintroducing devices to increase physical strength and promote longevity. We no longer rely on specialist spaces such as gyms and practice rooms to host voluntary physical exercise but instead incorporate activity into the organization and design of space itself.

Even a building's image must be fit. It is not enough to suggest the idea of cleanliness with the color white or expansive plate-glass windows. A building must now convey the aesthetic of an athletic body: bold and robust. Emphasis is no longer placed on the structural skeleton but rather on movement and muscular mass, and on the display of toned contours, connective tissue and tendons.

Yet in reality, muscle buildings cover ever fatter bodies. Our dwellings are growing larger, as is the space we require to store our belongings, despite the decrease in size of the nuclear family. Between 1990 and 2003, the size of houses in Australia increased by 60 percent; in the United States the increase was 50 percent. In 2005, storage space in the United States — what Tom Vanderbilt has [nicknamed](#) the "Great American Self Storage Empire" — totalled 1.875 billion square feet. [18] And according to Elizabeth Farrelly, the suburbs have become "McMansionlands." [19] This swelling epidemic is spreading everywhere with rising standards of living and increased consumption.

We may now speak of the phenomenon of "globesity," as defined by historian Sander L. Gilman, with regard to bodies, buildings and land use. [20] The territory overrun by urban sprawl in the past 60 years has the character of yet another bloated body, supported by an inadequate and deteriorating internal structure — the skeleton too fragile, the arteries and vital organs of urbanism struggling to support an engorged body mass.



Henry Dreyfuss Associates, Body Measurements. [From Niels Diffrient, Alvin R. Tilley and Joan C. Bardagjy, *Humanscale 1/2/3: A Portfolio of Information*, Cambridge, MIT Press, 1974; © Henry Dreyfuss Associates]

### The Inadequate Body

According to some scientists and doctors, our bodies are not biologically suited to cope with the sudden environmental changes they have been subjected to in recent decades. Nutritional specialist Barry Popkin maintains this position in explaining why “the world is fat”:

Over the last half-century, we’ve experienced rapid and widespread changes in how we eat, drink and move. We live in a fat world because the human body — a product of millennia of evolution — can’t keep up with these changes. [21]

Our genes need more time to adapt to the multitude of technological and environmental changes: “In terms of evolution we weren’t built to drink Pepsi, sweetened tea and lattes, and piña colodas.” [22] Researchers Michael L. Power and Jay Schulkin share this opinion, speaking of a “mismatch between adaptive biological characteristics of our species and the modern environment.” [23] The immunologist Mark Jackson, too, asserts:

It is not surprising that dramatic modifications in modern lives were implicated in rising trends in allergies and in many other ‘diseases of affluence’ such as cancer, heart disease, diabetes and obesity. [24]

Contemporary life is lived almost entirely indoors. What, when and how we eat and drink have changed radically with the new model of industrial food production. New chemicals included in medicines, detergents, pesticides, paint and perfumes, and genetically modified crops are constantly in development. The volume of highway, rail and air traffic has increased exponentially with the desire to travel everywhere and do so faster. We surround ourselves with technological objects that save us time and especially energy (that is, the consumption of calories). Physical movement is no longer part of everyday reality for the majority of workers. Movement is contained by — and only available for some — a forced yet supposedly enjoyable exercise regimen.

The presence of technology — in all its expressions and ramifications — as a tool for managing the human body’s passage through this rapid environmental evolution places us in a post-human reality, a new era where the distinction between what is human and non-human is blurred. [25] These transformations also introduce the risk of new medical problems and new forms of illness. The animated

film *Wall-E* portrays a humanity so obese it cannot walk. This imaginary future is a compelling and ironic representation of today's world — and a significant contrast to the inhabitants of Alison and Peter Smithson's [House of the Future](#) (conceived in 1956 for the year 1980), who would be nimble and in perfect physical and mental health.



MIT AgeLab, *AGNES (Age Gain Now Empathy System)*, 2011. [Photo by Nathan Fried-Lipski; © MIT AgeLab]

Some fear that a constant reliance on technology and presumed technological improvements might conceal other dangers. Geographer Ellsworth Huntington cautioned in the 1940s that perfecting an environment dominated by climate control may mean that we “cease to increase our physiological adaptation to environmental conditions.” [26] Today groups such as [Design for an Aging Society](#) and the [MIT AgeLab](#) have spent years researching techniques to make life easier for Young-old, Senior-old and Old-old by means of new technology. The MIT AgeLab recently created a suit named AGNES (Age Gain Now Empathy System), a sort of new human form calibrated to simulate the motor, visual and strength capacities of a person in their mid-seventies. AGNES can be used to test any type of new design aimed at the needs of this age group. But the inherent risk in this approach is that designing objects, dwellings and urban environments to reduce strain on AGNES might in fact age younger bodies by minimizing the strength and friction between them and the environment.

Herman Hertzberger, faced with criticism of his [De Overloop house for the elderly](#) in Almere (1980), the Netherlands, defended himself by saying, “To live in a young building may keep them young.” [27] The effectiveness of architecture’s therapeutic function must be subjected to trial verification (in the 19th century there were cases of medical self-experimentation in which doctors used their own bodies for cultivating bacteria and testing experimental remedies on themselves). Yet, as Gayle Nicoll and Craig Zimring observe in their careful study of the Caltrans District 7 Headquarters in Los Angeles, designed by Morphosis, which adopts a skip-stop elevator system (serving every other floor) and favors stairs, it is impossible to assess whether this new model will have any consequences for user health. [28]

### **Cure or Care**

The size and characteristics of the body we inhabit today are very different from those of a century or even a half-century ago. Anthropometric measurements taken by the industrial designer Henry Dreyfuss in the 1950s no longer seem to satisfy contemporary shapes. Dimensions have changed so much that various projects are underway to scan the new male body; for example, to properly define men’s clothing sizes. According to fashion manager Umberto Angeloni:

Traditional men's sizes derive from measurements taken at the time of the Second World War, when men were very different. ... We are still trying to dress men of the third millennium according to the bodies of their grandfathers. [29]

Meanwhile, physical and athletic performance has improved. Life expectancy is longer, particularly in Europe, Japan and North America, distinguishing these regions and cultures from the rest of the world. Building a different body not only prolongs life but also produces a new humanity, with new concerns and values. We think about the family and sex differently and face new inter-generational conflicts. And we conceive of our own lives not as a single duration but as a sequence of many possible lives. As the economist Hervé Juvin has remarked, "Aging is becoming a social phenomenon rather than a physical one." [30]

Whereas modernism's idea of progress was tied to general cultural, moral, economic and material advancement, progress is concentrated today in the improved performance of individual bodies. [31] Pursuit of the "good life" in the 21st century is a quest for pleasure, attainable through various available modes of consumption. This finds its fullest expression at a certain period in our lives — the "golden years" of retirement, when we are free of the constraints of family and work but are not yet eroded by the body's deterioration. At this age we live permanently at leisure, fulfilling the utopian visions of the 1960s avant-garde and also an ideal of consumerism, as Deane Simpson describes in his essay for *Imperfect Health*. [32] And like all utopian visions, that of the American and European residential retirement community, too, depends on certain degrees of segregation.



Golf cart pathway, The Villages, Florida, 2005. [© Deane Simpson]

The medicalization of our society has initiated a process in which the nonmedical problems of daily life (from anxiety to infertility, from aging to death) are more and more treated as medical. And according to Peter Conrad: "The key of medicalization is definition. That is, a problem is defined in medical terms, described using medical languages, understood through the adoption of a medical framework, or 'treated' with a medical intervention." [33] Architecture and urban planning have since undergone a parallel process; they rely increasingly on medical rhetoric to describe problems and arrive at solutions defined in the medical milieu. An ever growing number of urban, environmental and architectural problems are treated as medical, and remedies are sought in increasingly specific solutions; tailoring requirements to particular groups of ill or presumably ill individuals leads to conflicting, contradictory solutions, and finally to the even greater segregation of various demographic groups. In this sense, architecture — subject to medicalization — should itself be considered a "sick" body.

Architecture and urban planning have adopted the bellicose stance of Western medical rhetoric, aiming to “combat” illnesses, viruses, stress. Other possible approaches have been neglected, such as the simple activity of listening, which homeopathic specialist and entrepreneur Christian Boiron considers fundamental for understanding the real crises of which “illnesses” are only a symptom, or Nan Ellin’s suggestion for a process of improvement based on potential already present within a territory, rather than the notion of treatment. [34]

Nevertheless, medicalization remains a bi-directional process. Though it can be understood as a phenomenon of incremental development, having occurred in our society throughout the last century, a reverse process is still possible. And demedicalization has successfully occurred in some cases, for example with regard to homosexuality and masturbation. [35]

The demedicalization process, if applied to architecture, might allow the discipline to escape the ambiguity and moralism of contemporary ideas of health by taking both problems and solutions out of the realm of individual commitment and restoring them more appropriately to the larger sphere of social surroundings. In this way, it might be possible to recover one’s capacity to be critical with respect to public health policies; to take part in the debate while renouncing the allegedly rational, scientific solutions prescribed by a medical idea of health. As architects [Kersten Geers and David Van Severen](#) observe in their theoretical project for a healthy city, the most significant shift for architecture and urbanism will be from the idea of cure to the idea of care — in the process of taking care of our bodies and our environments.