

## CAN BEAUTY KILL GERMS?: THE IMPACT OF TOWN AND COUNTRY PLANNING AND ARCHITECTURE ON PUBLIC HEALTH

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**Abstract.** In answering the question, “Can beauty kill germs?” let us Consider three points: 1. the mysteries currently surrounding the transmission of the Covid-19 virus; 2. What we know from research about the placebo effect—if not the actual immunological effect—of viewing nature in the process(es) of healing; and 3. the idea that the experience of art imitates the experience of nature. Connecting those in the context of the experience of beauty as defined and described in Chapter 6 of Buras’s 2019 *The Art of Classic Planning*, the possible reality of EPTED, Epidemic Prevention Through Environmental Design, emerges.

We may take for granted public health responses in buildings and infrastructure, but the classical method, as described in that book, reminds us that urban public health practices were effectively observed in the earliest cities of the Indus Valley, the Minoans, and the Maya, to say nothing of the Romans. Queen Elizabeth I had a flush toilet, and nearly 1 million people experienced the first ever public flush toilets at the 1851 Crystal Palace Exhibition in London. In everything it prescribes, from well-built sewers to the selection of natural, sustainable, and durable materials, to the ultimate prescription for beauty in the built environment, followers of the classical method have from the start applied EPTED.

Clearly, satisfying requirements for physical distancing, access to fresh air, and augmenting the post-pandemic return to life are embedded in the method. Further research may be needed to firmly establish what we can already deduce from use-based experience: That traditional buildings are healthier and that traditional design is natively biophilic. There is little doubt that the multiple proportions of traditional compositions can endow our moods positively, leading to health and wellness synergies.

Obviously, traditional well-building elements contribute to healthy building design. Traditional materials have low carbon footprints, and the social value of the skilled labor needed to build them increases the mental and physical health of all involved. Contrary to the “antiseptic look” but poor antiseptic qualities of blank, Modernist materials and surfaces, the genuine, naturally antiseptic and antibacterial qualities of traditional building materials such as stone, brick, stucco, and wood are known. But perhaps the greatest contribution of the classical method to EPTED is how it artistically addresses trauma, gratitude, and memorialization long-term; Healing from the trauma of this pandemic may be somewhat analogous to healing from wars and dislocation. It is suggested that the attitude of the classical method and the manner in which it wields beauty can help communities survive better in the face of extreme odds.

Indeed, beauty may not kill germs like an antibiotic can, but knowing what we know today from biometrics and neuroscience about beauty, it may not be wrong to suggest that its presence may impact human immune systems. Is it also possible that the stress-reducing qualities of traditional design may actually contribute to the community resilience in healing from epidemiological trauma?

**Keywords:** *classic design, classic planning, bats, physical distancing, countryside, traditional buildings building materials, public health, well being, immunology, Covid-19, life after Covid.*

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## 1. From first Cities to EPTED, Epidemic Prevention with Environmental Design



**Figure 1.** The main drain at Lothal India. Credit Raveesh Vyas 2

Fighting epidemics with architecture and urbanism is akin to fighting terrorism with CPTED, Crime Prevention Through Environmental Design. The idea is that minimizing the opportunity for petty crime can take potentially reduce the chances of terrorism occurring in that place.



**Figure 1.** The Roman Pont du Gard at aqueduct Nimes, France (40–60 CE) © Nir Buras

People learned early that urban public health was promoted by effectively removing waste water from inhabited areas. Amazingly, the early cities of the Indus Valley had some of the world's most sophisticated water supply and public sanitation systems. Epidemic Prevention Through Environmental Design, EPTED, is what we have been doing in the built environment since the first cities. The Minoans and Maya had flushing, private toilets, water pipes and sewer drains.

Rome had eleven aqueducts providing it with potable water. The Cloaca Maxima, built in the fourth century BCE, still drains the Roman Forum. Around 100 CE, direct connections of homes to sewers began, and the Romans completed most of the sewer system infrastructure with terracotta pipes.

In Medieval times, Jewish and Islamic *taharah*, ritual purity, laws served well those people. Medieval Islamic cities had hydraulic-powered water supply systems and Arabic travel guides rated bathing establishments. Fustat, Cairo's, six-floor tenement buildings had flushing toilets on each floor. In medieval European cities, small natural waterways, used for carrying off wastewater, were eventually covered over, mostly to hold back the stench. London's Fleet Street and Paris's Rue Montmartre exemplify this.

Queen Elizabeth I had at Richmond Palace a forerunner to the modern flush toilet, designed and installed in 1596 by Sir John Harington (1561–1612), her godson. The first flush bowl as we know it was invented in 1775 by a Scottish watch and instrument maker Alexander Cumming, and the flush toilet popularized in the 1851 Crystal Palace Exhibition in London. The Thomas Crapper Venerable toilet is exactly the same as a Victorian original. Thomas Crapper & Co.



**Figure 2.** Crystal Palace, 1851, where nearly one million people experienced the first ever public flush toilets. For a penny they got a clean seat, a towel, a comb, and a shoe shine. Source: By Dickinson Brothers-Dickinsons' comprehensive pictures of the Great Exhibition of 1851, public domain



**Figure 3.** The Thomas Crapper Venerable toilet. <https://www.thomas-crapper.com/>

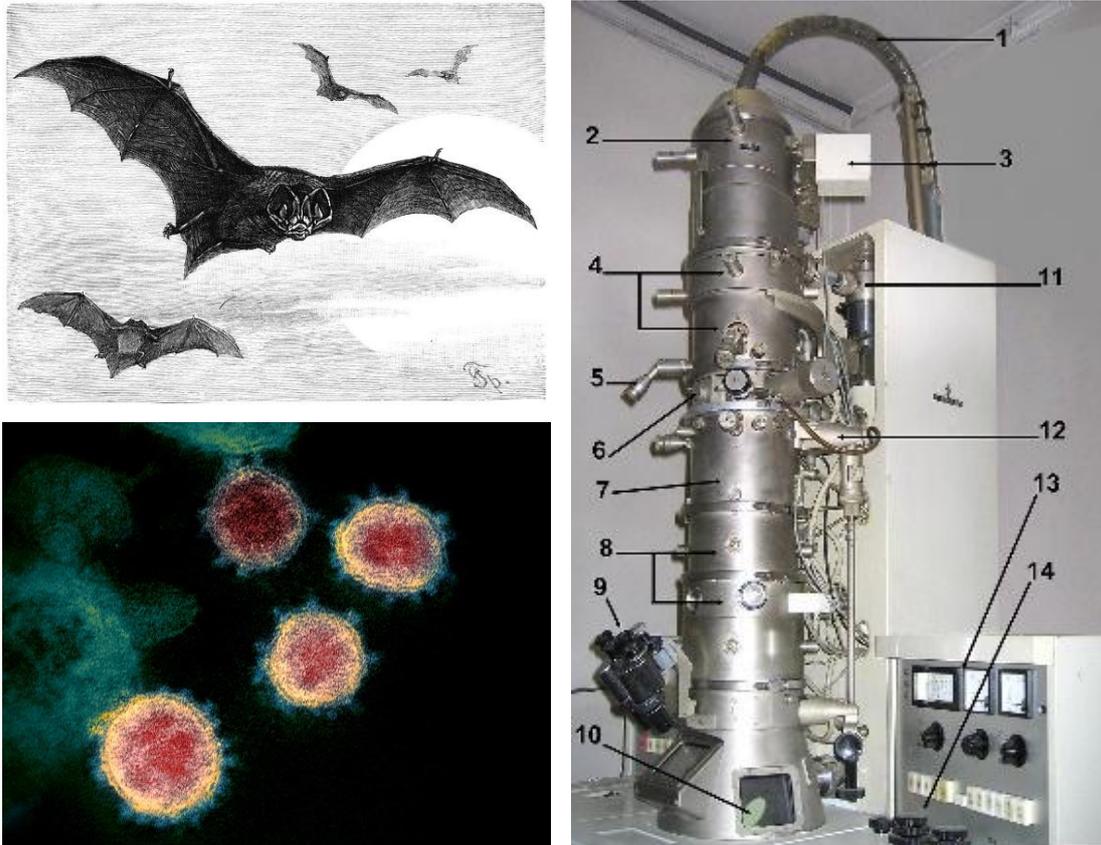
Public health practices that gelled with mid- and late-1880s bacteriology and contagion theory became so ingrained, that it is now common knowledge that clean water supply systems and dedicated sewer and rainwater collection and treatment help keep human and animal feces out of potable water, limiting the potential spread of cholera, polio, cryptosporidium, and giardia.

We may take for granted public health responses in buildings and infrastructure such as proactive pest control, solid construction, use of durable materials, deep foundations, and landscape barriers to rats and vectors that carry rabies and plague.

We unthinkingly use drainage and planting to maintain salubrious environments and eliminate brackish or still water to reduce risk for mosquito-borne illnesses. We understand how essential it is to avoid tainting potable water with human waste that can harbor Cholera, Cryptosporidium, Giardia, and Polio. We take for granted the thorough washing of food, kitchen work surfaces and equipment, and washing hands. We teach people personal hygiene to reduce the chance of infection.

All the above is in the realm of general well-building and public health. In everything it prescribes, from well-built brick sewers to segregated sewage and rainwater treatment, from salubrious design to the selection of natural, sustainable, and durable materials, from fresh potable water to good, individual health habits, classic planning town and country design have from the start followed EPTED.

Notably, the term “well-building” is a technical, Vitruvian, classical design term. It bears no relation to any for-profit or non-profit organizations or certifications that use that term or others similar to that they might issue.



**Figure 5.** Bats and Covid-19 (a) *Barbastella barbastellus* bats, a genus common to Europe and Asia. (b) Transmission Electron Microscope. The electron source is at the top, where the lensing system (4,7 and 8) focuses the beam on the specimen and then projects it onto the viewing screen (10). The beam control is on the right (13 and 14) (c) Transmission electron micrograph of Covid-19 virions with visible coronae. Images public domain

But with influenza in the front seat, we notice that the virulent animal flus of the twenty-first century, have a particular relation to bats: bats with camels (MERS), bats with civets (SARS), bats with swine (swine flu), bats with pangolins (Covid-19), bats with primates (Ebola), and just plain bats (Nipah virus). The bats' high mobility, broad distribution, life spans of over 30 years, range overlap of species, and social behavior make them particularly favorable hosts and vectors of disease.

Could it be that new urban fabric is encroaching too deep into bat territory? Are recent urban architecture or landscaping more attractive to bats than their natural territories? What might proactively stewarding such species in the wild and in urban environments look like? Is there place for workarounds so that demand for some types of bushmeat can be met in a safer way?

## 2. Physical Distancing, Fresh Air, and Countryside: Traditional Urbanism Helps Make Communities Resilient

Given that disease transmission is dependent on human behavior, a pandemic like Covid-19 brings up specific environmental demands, including physical distancing, access to fresh air, supporting the immune system—and planning for the post-pandemic return to life.

It is perhaps not surprising that the first principle of classic planning—the proximity of countryside for daily life benefits such as mental balance, recreation, animal corridors, and close-in farming—corresponds to the most important requirement of the Covid-19 pandemic—physical distancing between communities.

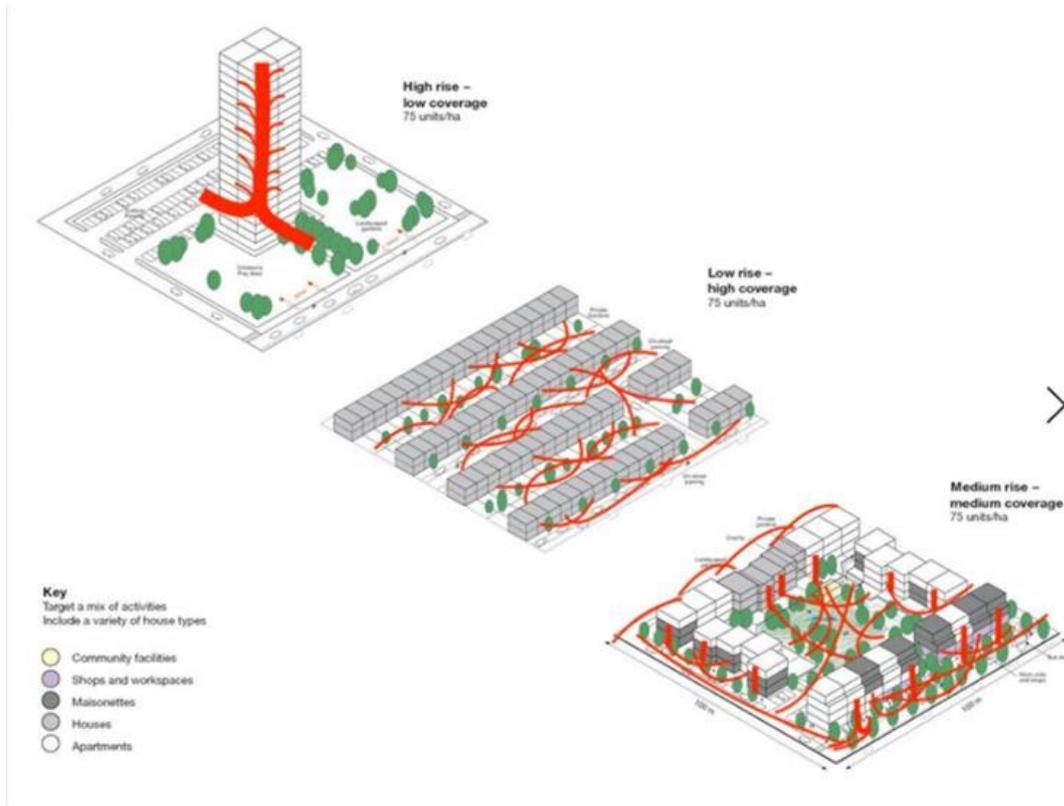


**Figure 6.** Even during normal times, groups of people distance themselves intuitively apparently following the cues of the architectural rhythms. Street in Rome. © Nir Buras.

According to Buras (2019), a first step in laying out fabric is separating it from adjacent districts. But in urban fabric, the epidemiological requirement for physical distancing is easier to attain in classic streets because, it is easier and safer to distance on streets designed for people than those drawn out for cars. In emergencies, the classic street hierarchy can better facilitate evacuation, and in normal times, the hierarchy of parks can facilitate the exercise and fresh air desired. In epidemics they fulfill the neighborhood “physical-distance” requirement when exercising or taking fresh air.

As demonstrated by Mehaffy (2020), distancing is not counter to so-called “density,” which is itself a fallacious measure, taking very different forms, with very different connective properties, and associated impacts on health and well-being.

It is wrong to think that tall buildings are necessary to achieve greater densities. Austrian architect Roland Rainer's (1910–2004) estate housing concepts called for a “structured and dispersed” fabric, as realized in his projects at Am Mauerberg in Vienna (1962–1963) and Puchenau near Linz from 1963.



**Figure 7.** Michael Mehaffey based on a drawing by the UK Urban Task Force demonstrated in this figure that the same population density can come in very different forms, with very different properties

In the context of Covid-19, tall buildings have much in common with the cruise ships where so many people became infected. Their common lobbies, enclosed elevators, and common HVAC systems, are “choke points” where airborne disease transmission is facilitated. Such conditions are exacerbated by the absence of operable windows.

Indeed, classic-plan urban fabric avoids centralized choke points. Without the compelled close proximity that tall buildings have, they exhibit less risk. Moreover, The architectural rhythms of traditional doors, windows, and other elements throughout the fabric, can intuitively, organically—and beautifully!—inform the spacing between people. While in normal times, they provide walking rhythms akin to musical bars in a score, in all times they comprise beautiful frames within which solitude or intimacy can be played out.

According to Jacobs (1961), in those windows and doorways we have “eyes on the street,” real people in real time, not CCTVs. The spillover effects of pretty urban fabric are not only added security and safety with children walking to school and playing in the street. They also include the public health benefits of people spotting in real time nuisances such as standing water, potholes, and trash that can severely impact basic

public health. The sum total is a not the “supervised community” that we see in some countries, but the more resilient community, which we know as historically withstanding challenges.

### **3. Traditional Buildings are Healthier.**

Perhaps the greatest requirement in the Covid-19 epidemic re buildings is the need for fresh air and convenient quarantining within homes and families. The need to quarantine people who shelter at home may call for dedicated “quarantine rooms” with operable windows, and an outdoor terrace adjacent in both houses and apartments. On the good side, the ubiquitous—and often unused—balconies of Modernist highrise residences may get a new lease on life. But when it comes to design and layout, having in residential units a “natural room” with an adjacent accessible outdoor space is more reminiscent of pre-air-conditioning sleeping porches as in Washington DC, or the screened “Florida Rooms” of the 1960s (Hailey, 2009).

Indeed, one of the wonderful discoveries during this epidemic are the joys of clean air, reminding us that buildings consume 30% of world energy. 10% of world energy goes towards air-conditioning, and 20% (!) to lighting. In contrast, traditional well-building calls for daylighting buildings, naturally ventilating rooms, and installing operable windows in them (Kahan, 2019).

The elephant in the architecture room is the ludicrous “green” belief in sealing a building or house against air penetration and then mechanically “conditioning” that air. The H1N1v virus, Coronaviruses, and even Legionnaires disease are often spread by inhaling contaminated aerosolized droplets, be they directly from people or indirectly through AC systems.

As Salinger (2019) points out regarding the Biophilic Index, Modernist environments are anti-biophilic, and they reduce the human body's resistance to infections. In fact, the indoor environments of Modernist buildings have been identified as unique ecological niches with their own biochemical milieu, fauna, and flora. The sophisticated construction methods and the “innovative” materials and machinery required to condition the spaces produce a large number of chemical by-products, permitting the growth of a host of microorganisms.

Although sealed buildings and HVAC systems have been known to cause sick building syndrome, data has yet to be collected on their inhabitant viruses. But the variety of humidity- and temperature-regulated ducted air in sealed Modernist buildings is ideal for supporting a broad range of microorganisms. The indoor environments of such “sick” buildings may be de-facto “petri dishes.” Scientists have described in them spectrums of potential pathogens, causes of occupant illnesses, and multiple sources of toxic substances.

In contrast, traditional design is natively biophilic—the classical method is perhaps “100% biophilic”—and uniquely “healthy” (Allen & Macomber, 2020). Enhanced by the balance of horizontal and vertical elements, the organized complexity of traditional forms and details playing in sunlight, and the wash of daylight in their interiors, are pure magic. Inside, color emanates from both the hue of transmitted light and that reflected off the surfaces of the ordered textures of the natural materials, which make up the interior architecture.

The multiple proportions of traditional compositions, endow our moods positively, with a domino effect that leads to health and wellness synergies. The positive sensation is further enriched with the assortment of moldings and curves that make up much of the columns, vaults, arches, and domes where they appear.

As discussed in Buras (2019), traditional design feeds the human eye with what it was designed for: to look for and interpret details that are essential for our survival. We respond to the architectural details and the patterns in natural materials such as wood, travertine, limestone, and marble. Even the presence of water is implied, literally in fountains and pools, but as much indirectly through elements such as roofs, eaves, gutters, downspouts, water tables and, perhaps most important—the weathering that water “paints” on the exterior walls. In short, the classical method and traditional architecture are biophilic and healthful.



**Figure 8.** Indoor and outdoor rooms for health come with design authenticity that is high on the biophilic index (a) Sleeping Porch in Eleanor Roosevelt’s stone cottage at Val-Kill, Hyde Park, New York. Public domain (b) Florida Room, Governor’s Mansion, Tallahassee, FL Public domain (c) Chatsworth, © Nir Buras (d) Shalimar Garden, Srinagar, Kashmir, © Nir Buras

#### 4. Traditional Materials are Naturally Antiseptic

It is fairly well-established that well-being and its violations affect our immune system. With immunity tuned by life style variables like sleep, nutrition, obesity, and exercise, but also by emotions, personality, and social status, it is fair to extrapolate that the design of the built environment can also have measurable impacts (Rachman, 2016).

Parallel to growing interest in holistic traditional Eastern practices which are being utilized as measures for healthier lifestyles, Western traditions such as classical music and painting—but especially traditional architecture and urbanism—are being found to have similar holistic impacts.

Knowing what we already know about Covid-19, we understand that pedestrian-centric urbanism and traditional environments that recapture indoor–outdoor relationships may be key to overcoming it. We understand the need for good indoor air quality, and reducing contaminants such as molds and bacteria. But the materials of modern furniture, flooring, coatings, paints, adhesives, sealants, wall coverings, textiles, insulation, and cleaning products seem to not only stress our wellbeing. They may be putting our immune systems at risk (Loftness *et al.*, 2007).

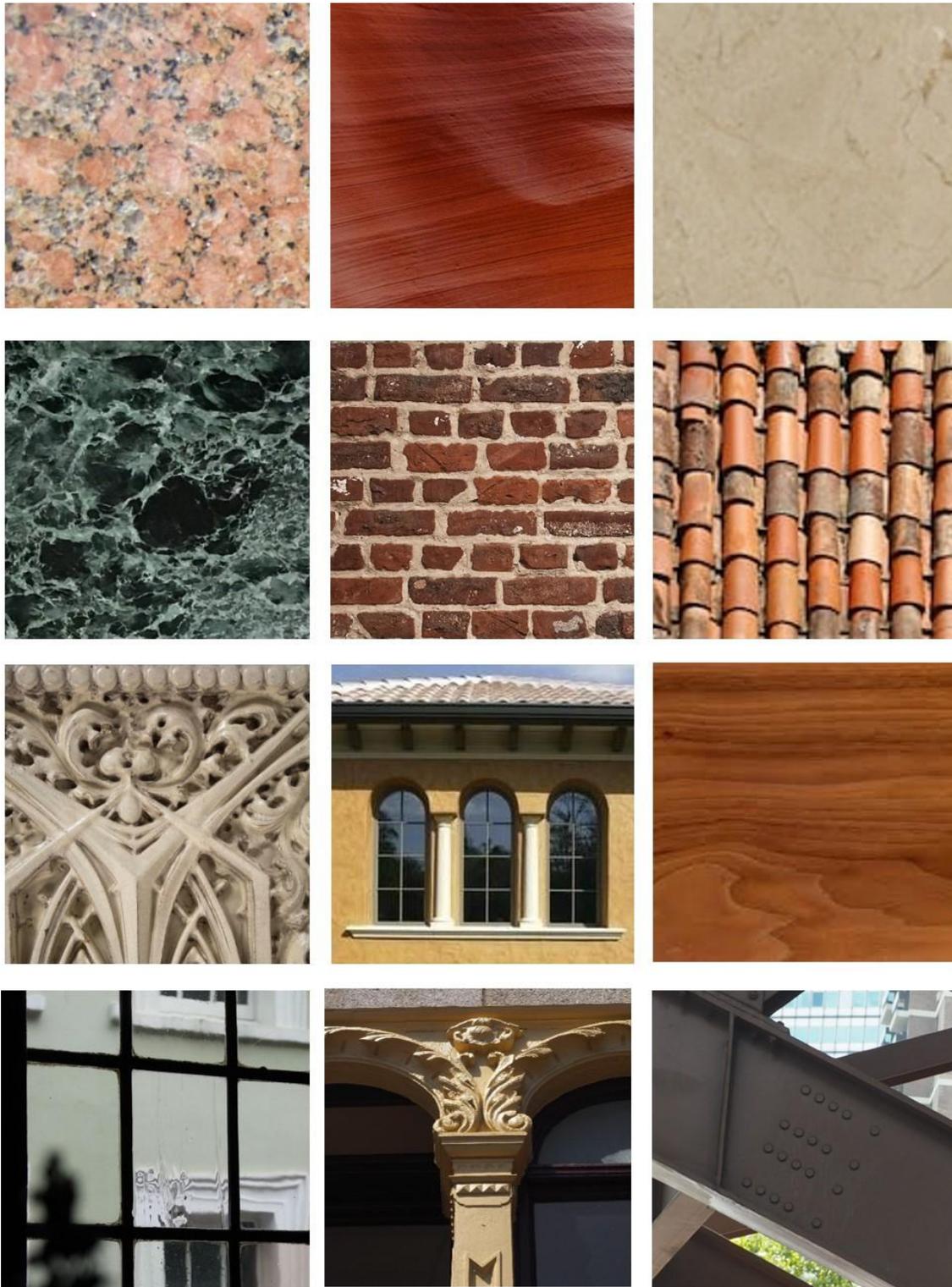
As discussed in Buras (2019), the standards of traditional design are holistic. They build on the structural sustainability of traditional materials such as stone, brick, stucco, and wood, their low carbon footprints, their antiseptic and other health benefits, and the social value of the presence of the skilled labor needed to build them.

Well-building materials include granite, sandstone, limestone, and marble, but also wood, brick, stucco, and glass, with a modicum of cast iron, steel, and unreinforced concrete; copper for roofing and flashing, and bronze for non-structural exposed metal elements. Metals should not appear on more than 5 percent of necessarily exposed structures—probably less. Masonry is preferable for exterior wall construction, and stone or glazed terra-cotta for building façades. For its durability, cast iron should be reexamined as a viable construction material.

Obviously, traditional well-building elements contribute to healthy building design, lowering the potential risk for people in quarantine. Well-building ensures indoor environmental benefits such as good air quality through natural ventilation, low chemical emission materials, and wall sections that minimize moisture retention and mold growth. A three-wythe thick brick wall will not pass water all the way to the building interior. Nor will it harbor mold.

The selection of low-emitting consumer products, furnishings, and appliances is a primary control measure for achieving good indoor air quality. But the longevity of well-built buildings may bring long term benefits such as enhanced health and well-being can bring, includes greater individual and societal resiliency, and lower healthcare costs.

Outstanding examples of this include the antiseptic and antibacterial properties of wood and lime, and of the health benefits of the surfaces of natural materials—even polished—over that of metal and plastic, on account of their natural porosity. The Nordic Wood Project, which compared the hygienic properties of wood, plastic, and steel, showed oak as having the highest antibacterial performance, followed by beech, ash, pine, and spruce. Bacteria survived longest on plastic followed by stainless steel (Milling *et al.*, 2005).



**Figure 9.** A partial palette of sustainable building materials (a) granite (b) sandstone (c) limestone (d) marble (e) brick (f) terra cotta (g) glazed terra-cotta (h) stucco (i) wood (j) glass (k) cast iron (l) steel. © Nir Buras

Another example is lime. The sixth most mined material in the world, lime is used in nearly every industry. For thousands of years it has been essential in construction, being used in mortars, paints, antimicrobial coatings, adhesives, plaster, and stucco.

Limewash, a.k.a. whitewash, is a durable and antimicrobial finish for both interior and exterior use on masonry and wood. On metal it can stop rust. Its antimicrobial properties to this day provide hygienic and sanitary benefits for dairy structures. Salt can be added to prevent mold.

Notably, an even more durable finish for exterior use is mineral silicate paint the lifetime of which exceeds one hundred years. Buildings such as the White House, Buckingham Palace, the Sydney Opera House, and the Bolshoi Theatre are painted with such paints.

The town hall of Schwyz, Switzerland, illustrated below, received its coat of mineral paint in 1891. Plastic is generally not a building material and should likely be avoided. Contributing to that argument is the performance of synthetic paints which may be inappropriate for extended use.



**Figure 10.** The 120-year old reds, ochers, and creams of the town hall of Schwyz, Switzerland are still bright. Public domain

## 5. Trauma, Gratitude, and Memorialization: Attitude and Beauty in the Face of Extreme Odds

Anyone looking out from their shelter-in-place and seeing a wall will be touched by O. Henry's heart-wringing story, *The Last Leaf* (Henry, 1907). Set in Greenwich Village during an early-twentieth-century epidemic, the story tells of Johnsy, an ill young woman who believes that, in the progressively barren winter, she will die when the ivy vine outside her window loses its last leaf.

As the season grows colder the vine gradually sheds its leaves. But one last leaf hangs there long enough for Johnsy to recover her health. It turns out that it had been painted by Johnsy's old neighbor, the artist Behrman, who longed to produce a masterpiece.

Mustering all his artistry for the leaf, Behrman dies of exposure from painting the last leaf.

Healing from the trauma of this pandemic may be somewhat analogous to healing from wars and dislocation. Despite the ubiquitous computer, and smartphone systems, the prolonged physical distancing may be comparable to isolation encountered in space flight, polar habitation, solo voyaging, and even solitary confinement. It could be that, despite the available technology and medicine, the traumas of solitude and the suspense of “not knowing” are no different from the historical mystery of pestilence and the enigmatic redemption from it known from the Renaissance and Baroque.

In a way, those times were “sealed in a kingdom of plague” Jones, (2012). Old Masters like Tintoretto (1518–1594) fought the mortal contagion by painting his greatest works under its shadow at the Scuola Grande di San Rocco .in Venice. Hans Holbein (the Younger, 1497–1543) and Titian (1488/90–1576) died of it. Yet the quattro-, cinque-, sei-, and settecento Europeans asserted the glory of life through the treasures and beacons of their incredible civilization.

It is as if the outstandingly beautiful monuments to redemption, salvation, and gratitude erected at the dawn of the age of science reflect the idea of the unity of mind and body. They were built before technology and science emerged and the Romantic era separation of body and soul, sent the body to science and the soul back to religion. But that is our world today. We have a Large Hadron Collider—and ISIS.





**Figure 11.** Life between plague and redemption (a) Entrance to the Grand Canal in Venice by Canaletto, c. 1730. On the left is the Santa Maria della Salute (b) Black Death mass grave, Toulouse. ©Archeodunum SAS, Gourvennec Michaël

We can ask tongue in cheek whether beauty can kill germs, but maybe there is some truth to that. Indeed, plague monuments and votive churches from the 1400s to the 1800s are among the most sophisticated and beautiful structures ever built by mankind. They remind us that our new scientific understanding of wellbeing and immunology indicates that much of the architecture and urban practices employed before 1920 also contributed to human wellbeing. And while we benefit greatly from the techno-medical-health advances, they remind us that, for environmental design, the classical method is still today an exceptionally effective tool.



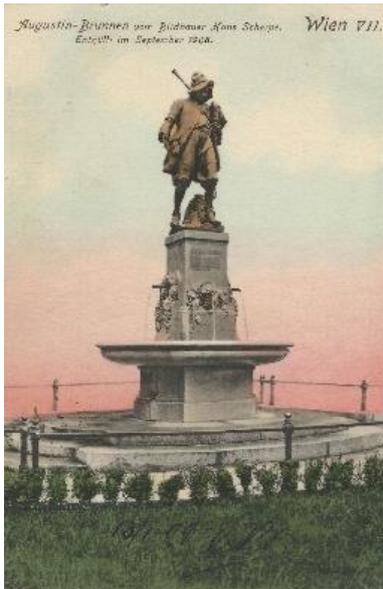


**Figure 12.** Plague memorials on the Campo in Siena and London © Nir Buras (a) Fonta de Gaia (b) Cappella della Piazza © Nir Buras (c) St. Olave's, London. David Ross and Britain

On the face of it, we are looking at plain superstition wrapped as religion. The architecture and iconography of the beautiful *Cappella della Piazza* on the Campo in Siena (plague of 1348, built 1352) progress from medieval gargoyles to mythological Renaissance gryphons, considered guardians of divine power. Nearby, the *Fonta Gaia* celebrates with Christian-themed carvings 1402-1419 the removal of a statue of Venus, which had graced the fountain since early times, because it was blamed for Siena's recurring plague. The macabre skulls over the entrance to the churchyard of St Olave's church in London (1658) literally commemorate trauma, and the alleged burial place of Mary Ramsay, believed to have brought the plague to London in 1665.

Still steeped in medieval-style superstition, Vienna's Plague Column in the central Graben square (1687) commemorates the end of the 1679 epidemic with extreme Baroque ornamentation and rich iconography of the Trinity, and of Faith overthrowing the Plague. *Lieber Augustin*, "Dear Augustin—a troubadour who became a symbol of hope after he survived a night in a plague pit after being tossed into it in a drunken stupor—commemorated that plague in a memorial that was removed by the Nazis for its bronze.

Vienna's iconic and most outstanding Baroque votive church, *Karlskirche* (1715–1737), by Leibnitz's contemporary, architect Johann Bernhard Fischer von Erlach (1656–1723), not only expresses gratitude for surviving a plague (1713). It charts out the West's metaphysical growth by referencing the West's most significant religious buildings—Solomon's Temple in Jerusalem, the Pantheon, Hagia Sophia in Constantinople, and Saint Peter's in Rome.



**Figure 13.** Viennese plague memorials (a) The original Lieber Augustin fountain (b) *Karlskirche*, Facade (c) Interior (d) The Graben. Images public domain

Controlling the Levant trade, Venice, which together with its glorious merchandise also imported rats, fleas, and plague, witnessed seventy plague epidemics! Plague churches built there include the Scuola di S Rocco. Veronese lies buried in St Sebastian, which he

decorated with plague iconography including the Pool of Bethesda. Palladio (1508–1580) built the great *Il Redentore*, “The Redeemer” (1577–1592), and Baldassare Longhena (1598–1682) built *Santa Maria della Salute*, “Saint Mary of Health, (1631–1681), after the plague killed nearly a third of the Venetians.

If the deaths of our forebearers were not in vain, the beautiful Baroque work memorializing the horrors and losses they endured must inspire our survival and redemption today. The beauty of the votive churches must serve as a cultural wake up call to consider our cities and environments more aspirationally—and less as problems to solve. Covid reminds us that we need to relearn to seek balances of planning for town and country.

- To make streets that inspire in people the thoughts and intuitions that help in their healing.
- To build durably using the shapes and proportions that best suit human biometrics, perception, and comfort, thereby likely helping fortify immune response.
- That spirituality—embodied in beauty—is not attainable in the machine aesthetic or by means of machine virtuality.
- That beautiful buildings represent the political and cultural institutions of democracy
- That cloisters and pointed arches symbolize education and the parliamentary tradition
- That the pandemic creates an opportunity to triage our dependence on apps and automation in favor of people-centric community life.
- That we should move away from sealed buildings and towards better ventilation and openable windows.
- That without the knowledge of well-building, our predecessors would not have the cues for well-being and well-thinking that helped them drive the advances in society, science, and health that are getting us through Covid-19.

Modernity induces us to see these monuments to salvation and gratitude in a new light. In their construction, the Baroque monuments reeled in the survivors from their trauma to normalcy. These beautiful memorials to survival and redemption are breadcrumbs for us to follow, tips for how to experience what we are going through now, and ideas of what to think next. Looking at the plague monuments we claim them again today as cues to our own consciousness.

In the marvelously rich nexus of mind, body, perception, and place is the collective intelligence of how to build holistic and beautiful environments. Olmsted and Vaux expressed this understanding in their 1860s vision for Bethesda Terrace and Fountain, overlooking the lake and woodland Ramble in Central Park. The experiential apex of the park, Bethesda Fountain includes the only originally commissioned major sculpture for the park. It was designed by Emma Stebbins (1815–1882), the first woman to be publicly commissioned for a major work of art in New York City (Rosenzweig & Blackmar, 1992).



**Figure 14.** Stebbins' Bethesda Fountain at Central Park. © Nir Buras

A great artist, Stebbins' sensibilities were informed by 500 years of art depicting deliverance from epidemics. Bethesda Fountain celebrates the Croton Aqueduct, which had saved New York City from a cholera epidemic. Linked to the passage in John 5:2–4 on Jesus' healing at the Pool of Bethesda, the eight-foot bronze winged *Angel of the Waters* (1873) holds a lily in one hand for purity, while blessing the water below with the other. The putti supporting the top basin below her, represent Peace, Health, Purity, and Temperance.

The humanistic attitude that such monuments express speaks to our ongoing cycle of trauma, salvation, gratitude, and memorialization. But the “meta-message” of such beautiful structures is different for every generation. In the harsh light of our sudden mortality, the “cool factor” of Modernism appears very thin. The upshot of Covid-19 should not be “contactless pathways,” “life lived by smartphone,” broad, uninhabited sidewalks, and streets with metal and plastic dividers, as charming as cattle corrals (Wainwright, 2020).

Could it be that people are getting by at this time *despite* stress-inducing Modernist design and dysfunctional urban intervention? O. Henry may have taken this matter to the maximum, but we know now—and we didn't know this twenty years ago—that the visual stimuli of traditional and classical architecture are de-facto cues to well-being (Buras, 2019).

We now understand that Modernist designs cause the release of serotonin and that traditional designs that of dopamine. We know now that Post-Covid some dystopias

projected by planners and media may be considered not progressive but part of what impeded survival and healing.

Indeed, beauty may not kill germs like an antibiotic can, but knowing what we know today from biometrics and neuroscience about beauty, it may not be wrong to suggest that its presence may impact human immune systems. Is it also possible that the stress-reducing qualities of traditional design may actually contribute to the community resilience in healing from epidemiological trauma?

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