

Absence of Continuity in Cultural Landscapes

For centuries the evolution of cities embedded historical context into overlapping layers of increasingly more urbanized fabric that organizes human habitats. This process, guided by changes in the way people move, goods are delivered, and information accessed¹, has continuously produced cultural landscapes representative of material artifacts, traditions, and societal customs forming our collective, “unwitting autobiography”² treasured through generations.

However, certain emerging forces and new design practices might soon slow down this process of sequential accumulation of knowledge that has been portrayed so ardently by many individuals through the lenses of time and experience. Notably, the author Avi Friedman, describes in the opening chapter of his book titled “A Place in Mind” an Istanbul teahouse shaped through centuries of history. Its courtyard conveys specific ambiance enhanced by:

“rounded-edge cobblestones, grapevine adhered to trellises, fading color tiles, wooden stools with marks of many glasses that rested on them, and a worn rug covering the sofa.”³

Such spaces are not unique to the Middle East but increasingly rare in modern cultures where the “lack of patience and constant longing for instant gratification”³, coupled with accelerating fashionable trends dictate the next best spatial configuration supporting consumption habits in profit driven economies.

CULTURE OF PLANNED OBSOLESCENCE

The future of a city might be as an organism dependent on carefully planned obsolescence embracing “cradle-to-cradle”⁴ design philosophy that defines contemporary sustainability movement and lays down foundations for potentially holistic yet “sanitary in their outcomes” design approaches. At the core of the culture of planned obsolescence is a new paradigm of aiming for all human creation to be equipped with an expiration date where buildings will be substituted with new structures providing the latest features enhancing environmental controls and improving healthy living conditions. Such environment might be heavily influenced by multi-national corporations in need for a steady stream of revenue or unable to rely solely on new construction.

On a very rudimentary level this concept is hardly a novelty. In the complexities of today’s real estate market, land leases expire regularly and building interiors

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change tenants and occupancy types according to the rhythms of economic activity. Still, the idea of an entire cityscape being regulated on par with the realms of manufacturing and entertainment industries that regularly churn out new releases of digital gadgets and desired realities, seems unattainable if not far-fetched due to the physical scale, logistical complexities, and regulatory interdependencies of a modern megalopolis.

However, if left unchecked, the “invisible hand of the market” described by Adam Smith, might cripple human ability to identify with the origin and context of material history derived from cultural activities of our ancestors. The life-long multi-sensory exposure to the past will only be substituted by increasingly more virtual and augmented realities, eventually reinforcing platonic relationships. Therefore future cultural landscape might lose the ability to accumulate knowledge because entire layers of its composure would be replaced at specified intervals.

Such a future however, might still be quite far away. Nevertheless, new forces connected to financial markets, global natural resource ownership and politically motivated pressures for construction of entirely new cities are increasing. At the same time architects are required to respond to this pace of change by using new and untested technological advancements in most unsustainable regions of the planet while again using human beings as “test subjects” for their creations. We do not need to look further than the modernist Pruitt-Igoe urban housing project to imagine possible consequences.



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CULTURAL LANDSCAPE CHARACTERISTICS

On the physical level, cultural landscape continuity can be characterized as: **spatial**; based on the proximity and gradation of buildings and transitions connecting them, or **transformational**; rooted in the constant need for alteration of existing elements to serve new functions and fundamentally influenced by the evolution of transportation infrastructure. Both types however, can be found in the composition of cities around the world regardless of size, location, and age. Cultural landscape does not discriminate; it simply accepts changes and accumulates knowledge, which in turn assures physical continuity despite an occasional emergence of voids, large and small, that become repaired over time. Figure 1

While physical continuity can be abruptly broken in certain instances, the non-physical, **perceptual continuity**⁵ of cultural landscapes, which looks at the subject from perspectives of time and diversity, depends largely on a particular

Figure 1: Urban Infill, site located between two mixed use buildings repurposed to accommodate small business and public uses, Berlin center city, Germany.

combination and transitions between buildings and transportation infrastructure in addition to a variety of stylistic characteristics of architecture in order to determine whether the cultural landscape is **static**, **moderate** or **dynamic**.

For instance, the city of Florence, Italy can be characterized by significant, virtually homogeneous spatial continuity, underdeveloped transformational continuity of its transportation infrastructure, and largely static perceptual continuity of its cultural landscape. On the contrary, the city of Boston in the United States features well developed spatial and transformational continuities in addition to a dynamic perceptual continuity, despite the fact that its history spans only a fraction of the history of Florence. The resultant complexity of physical continuities is prone to archeological analysis for finding clues, cataloging artifacts, and formulating theories of origin and purpose. In such context, an ability to read ordinary cultural landscapes reveals an immensely rich repository documenting everyday lives affected by a variety of forces.

However, regardless of the stimuli origin, cultural landscape does not change rapidly. In order to modify the material elements composing it, one has to assume a need for major change in national culture, international affairs, significant technological advancements or misfortune of a natural disaster. Occasionally all these factors might be responsible for generational shifts that alter the continuum drastically and broadly when some layers are replaced or destroyed, and others modified beyond recognition.²

The following examples of three cities featuring significantly different development patterns provide a glimpse into the forces shaping the continuity of cultural landscapes.

TRANSFORMATIONAL CONTINUITY WITHIN DENSE, LOW-RISE URBAN FABRIC

For instance, Prague's tragic fire of 1541 removed significant portions of pre-Renaissance architecture on the west bank of the Vltava River, leaving Mala Strana (part of the city now called Lesser Town) with a need to repair its spatial cultural landscape continuity over many centuries.⁶ As a result, the perceptual continuity of cultural landscape among the Old Town, the Lesser Town, and the New Town despite being vibrant does not differ drastically.

On a much smaller scale, the bombing of the city during World War II created circumstances for Frank O. Gehry's "Dancing House", which might serve as an example of a reaction to changing political conditions after a period of cultural and technological suppression in former Czechoslovakia. Despite the fact that the building was erected on a site of national significance, both components of the new structure respond to the context of the surrounding urban fabric and advance spatial continuity of Prague's cultural landscape. While "Fred" blends into the predictable window pattern of its neighbors, "Ginger" charms the onlookers like the glazed cupola of Prague's Municipal House. Additionally, the "Dancing House" contributes significantly to the advancement of perceptual continuity of Prague's cultural landscape, which overall can be characterized as moderate (with the exception of the Hradcany district) mainly due to a lack of significant architectural developments in the 19th and 20th centuries. Figure 2.

In the coming centuries however, Prague's ability to accumulate and adapt contemporary physical content into a somewhat homogeneous and protected urban fabric might become challenging. For instance, recent controversy about the National Library design competition, a project that could have significantly



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advanced the perceptual continuity of the city, serves as a vivid example of further architectural stagnation. The need to cope with intensifying tourism activities⁷, diversification of population through in-migration from the east⁸, and globally influenced business practices might redirect Prague's spatial continuity of cultural landscapes from building exteriors to building interiors as evidenced by the latest development of the Palladium Shopping Center that incorporates in its structure medieval foundations and walls.⁹

Additionally, much greater value will be placed on the underground real estate, as already noted by several tunnels built directly below the historic, western side of the city and the completion of Tunnel Blanka that is scheduled for the end of 2014. In such a scenario, transformational continuity of transportation corridors might serve as an actuator of new, multi level, and unburdened by Prague's heritage, public space that shifts the automobile infrastructure from the already crowded surface to the underground.

TRANSFORMATIONAL AND SPATIAL CONTINUITIES WITHIN MID-RISE, LOW TO MID-DENSITY URBAN FABRIC

In contrast to Prague, the now unified city of Berlin, Germany that has been significantly destroyed during World War II still possesses a number of highly valuable sites that await development in the following forms: **infill** (many sites within the traditional, inner courtyard, 5-6 story urban block), **repurposing** (large plots of land along the Spree River), and **renovation/reactivation** ("peoples' palaces" located along the former Stalinallee).

Taking into consideration current development trends which heavily depend on economic cycles, the above mentioned sites would acquire their new "best uses" by responding to master plans, zoning ordinances, public hearings, and fulfilling certain financial objectives.¹⁰ More specifically, the ongoing codification of all facets of urban development according to the triple bottom-line philosophy, might dictate a range of socio-economic circumstances guided by profit, sustainability, and social justice. Hence future spatial and transformational continuities of Berlin's cultural landscape could contribute significantly to the perceptual continuity of the city. Additionally, its scope but not necessarily the quality could become less spatially restrictive as compared with Prague's ability to accommodate future growth because Berlin has an adequate capacity for the expansion of public transportation infrastructure both horizontally and vertically. The city

Figure 2: Prague's Cityscape featuring the "Dancing House," Czech Republic.

also has in its arsenal an underutilized river cutting through the center. Berlin's transformational continuity is further assured by current investments in linkages connecting local public transportation with regional and national high-speed rail systems, which transverse at the multi-level Hauptbahnhof pointing directly towards the political center of the country. Figure 3.

Should the population grow in the future, the city will be able to increase its density by not only building higher than the current 5-6 story zoning restriction but more importantly by utilizing underdeveloped sites that are already significantly better connected through public transportation and bicycle paths in contrast to many other European state capitals.

SPATIAL AND TRANSFORMATIONAL CONTINUITIES WITHIN DENSE, HIGH-RISE URBAN FABRIC

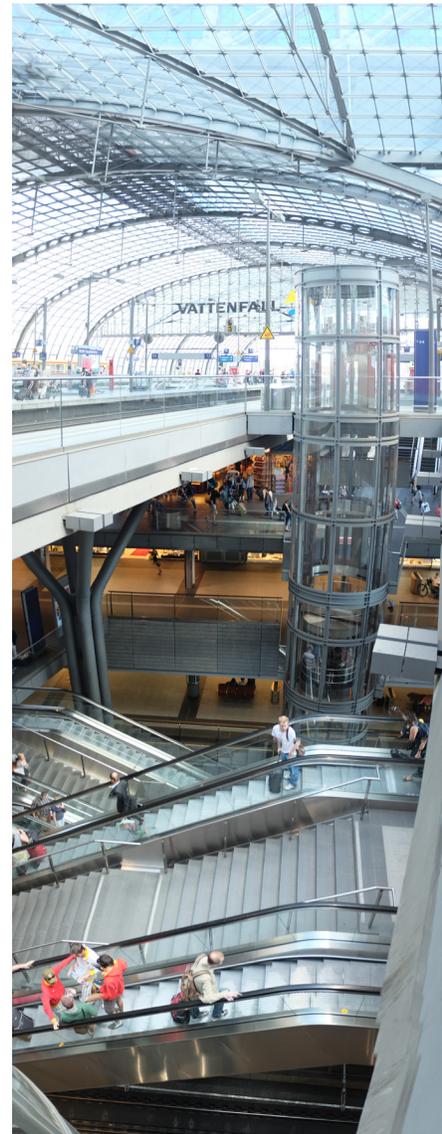
While multi-level transitions of a variety of transportation modes are firmly embedded in the urban fabric of New York City, the types of spatial and transformational continuities represent an additional dimension as compared to Prague or Berlin. **Transplantation** of continuity, a process largely influenced by the wave of immigration from the "Old Continent" is evidenced in the city in the form of traditional 18th and 19th century building practices borrowed from England, France and Germany, and later complemented by a rapid development of new structural materials, growth of manufacturing industries, and the expansion of an already robust transportation system built at the end of the 19th century (elevated rail system and the Grand Central Station) and the onset of the 20th century (NYC Subway System).¹¹

To a certain degree, the progress of the NYC municipal expansion can be explained through the theory of "an invisible hand of the market" propelling human desires to research, innovate, and transform by embedding sequential records of socio-economic changes in elaborate cultural landscapes. Furthermore, in modern cities like New York City the boundaries between spatial and transformational continuities are becoming increasingly less recognizable. Transitioning over time from a path, a road, and a street to a highway, the transportation infrastructure becomes embedded within the spatial continuity of buildings and slowly expands horizontally and vertically through multi-layered and interconnecting elements such as tunnels, pedestrian bridges, public courtyards, subway entries, civic squares, and plazas. This transition contributes further to the image of a very dynamic perceptual continuity of the city.

MULTI-LAYERED CONTINUITY

The transition from a "donkey route", the Nature's zig-zag initially prized by Le Corbusier¹², to the geometrical path of least resistance represented by such elements as "the grid, the highway, and the superblock"¹, is clearly visible in the artifacts embedded in cultural landscapes of the 20th century urbanism. New York City is a great example. As evidenced in the previously mentioned scenarios, disruptions that lead to alterations in mechanized movement have an ability to modify cultural landscapes horizontally; through transportation corridors located underground, on the surface and in the air; and increasingly more vertically through linkages necessary for transfer, transition, and delivery.

However, with the exception of large transportation hubs, vertical orientation still lacks significant public realm dominance and is only accentuated by helipad-equipped skyscrapers and occasional "bridging" of buildings; most notably the



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Figure 3: Multilevel Central Station connecting a variety of public transportation modes, Berlin, Germany.

Petronas Twin Towers in Malaysia and The Bridge of Aspiration connecting the Royal Opera House to the Royal Ballet School in London, England.

While no modern metropolis approaches the visual chaos of a futuristic city portrayed in the 1997 film “The Fifth Element”, the patterns for the upcoming multi-dimensional interventions within the urban fabric are clearly visible and quite ready for implementation. From autonomous vehicles and ultra-fast mass transportation systems¹³ to augmented reality, micro apartments, and vertical farming, the experience of the next generation of urbanites will clearly encroach on today’s science fiction.

In addition to the above-mentioned elements, another factor responsible for the dynamic evolution of modern cities is the eminent domain legislation that affects private ownership of real estate and creates an urban development platform favoring public use, while expanding the boundaries of metropolises outwards, downwards and upwards. This external pressure manifests itself through sprawl and extends spatial continuity of cultural landscapes by covering and transforming natural landscape at the perimeter. At the same time, to compensate for the loss of prime real estate at the core, this internal stress pushes vertical “layers of glass and steel” to new heights. At some point in time, the never-ending race for the heavens will certainly shift its focus towards creation of horizontal linkages connecting various skyscrapers equipped with ultra high-speed and high-capacity elevators. Landlords will realize that the unimpeded connectivity at higher altitudes allows the upper echelons of the society to operate independently of the densely populated base where rudimentary consumption practices occur. Such a move might extend the divide of societies from gated communities to places in the sky with unobstructed access to clean air and solar exposure. However, only certain cities will be able to accommodate such expansion practices.

Prague’s “Magistrala”, the north-south connector that cuts through the surface of the UNESCO designated World Heritage site and the series of tunnels planned to enclose an inner ring of the city are all examples of transformational continuity responding to changing socio-political and economic conditions in addition to the rigidity of the inheritably dense inner core unable to accommodate vertical expansion. Prague might need to expand vertically downwards by utilizing its extensive underground transportation infrastructure.

In Berlin’s case, future vertical connectivity can easily support a substantial population growth while preserving access to nature and recreation, and designating an adequate space for production facilities assuring jobs in a variety of sectors. The recently established EUREF Campus that capitalizes on latest trends in smart transportation technologies, serves as an example of an investment in the future of a vertically connected and developed city.¹⁴

New York City is perhaps most prone to future experiments with vertical linkages between buildings due to its inherent aptitude for innovation and lack of vacant property in its land-locked setting.

Simply put, in the near future, the presence of clear distinctions between land surface and underground infrastructure, and mineral and air rights, will transform a fairly horizontal pattern of a traditional polis into a multi-layered, increasingly more vertically oriented organism, comparable in principle and complexity to an ecosystem of a tropical forest. All this however, will not disrupt future continuity of cultural landscapes.

CONSTRUCTED DIS-CONTINUITY OF CULTURAL LANDSCAPES

From industrial/product design to building design. The accelerating pace of life and lack of time to reflect, savor the achievements, and construct on pre-existing bases while imprinting a “mark of time”, may lead to the future reliance of built environments on a planned obsolescence strategy. Commonly found in manufacturing industries, this profit centered business model of design is based on “production of goods with uneconomically short useful lives”¹⁵ in order to provide a steady stream of revenue through continuous upgrades or product replacement. With the exception to temporary structures this model does not bode well in currently established and time tested real estate development patterns that rely on new, site-specific construction. However, modern societies are already conditioned to follow the planned obsolescence model with almost every aspect of their lives. Recent trends of upgrading heating and air conditioning thermostats, and Internet connected housing serve as vivid examples. While real estate is still understood as a static element prone to change only by extraordinary measures, the practices of refurbishing kitchens and bathrooms, and installation of solar panels and solar hot water devices on roofs, are slowly eroding that perception. A typical single-family house is gradually becoming an ever-changing, upgradable product that soon might be treated similarly to automobiles, smart phones, and healthcare plans; fulfilling the fast changing needs of future generations.

Additionally, new laws and regulations place an increasingly more specific value at energy efficiency of real estate. Notably, recent implementation of energy efficiency measures for existing buildings in New York City might cause a wave of refurbishment of certain properties in a short-run and complete replacement of many more in a long-run.¹⁶ That however might only be the beginning of a transition from a static real estate market to a flexible real estate market that builds on the combinations of experiences derived from automotive (including recreational vehicle sector), aircraft, and marine industries in addition to the shipping container establishments resembling temporary, albeit permanent cities.¹⁷ Additionally, to satisfy the ever-increasing energy efficiency requirements, future dwelling units might have to be designed with robust plug-and-play capacities and easy or predetermined expansion capabilities.¹⁸

While construction of buildings still differs significantly from the manufacturing of goods, recent influences of design/build and prefabrication practices suggest that major changes in design strategies and processes might be on the horizon. Notably, the next wave of three-dimensional printing and automatized assembly with the ability to rapidly create large-scale objects composed from multiple materials, is transforming the traditionally linear building development process into a dynamic and continuous loop of refinement, repurposing, and replacement. New models for existing cities might rest on the fact that product, industrial, and architectural design processes are on a collision course, which will result in a merger disproportionately affecting built environments in places that lack heritage or have no means to protect it. In such cases the cultural landscape continuity will be interrupted through re/construction of buildings that possess “expiration dates”. This scenario will certainly be difficult to implement in Prague’s historic fabric but Berlin’s moderate spatial continuity of cultural landscapes would definitely allow for implementation of new models of urbanism within the infill sites and along the banks of the River Spree.

Future building permits of modular structures might stipulate useful time of occupancy and require the owner to dismantle or substantially upgrade existing

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configurations before the end of life date approaches. Since buildings are increasingly more modular, such a model of operation might also allow owners to adjust their real estate portfolio similarly to rebalancing a 401K-retirement program affected by fluctuating financial markets. That is also how continuity of cultural landscapes might begin to crumble because the accumulation of knowledge in build environments will not rely anymore on physical artifacts embedded in the urban fabric of cities. Instead, the historical information about the variety of spatial configurations of a site will only reside in digital form stored in "the clouds."

Corporate model for New Cities: the testing ground for planned obsolescence.

The proposed City of Masdar in the nation of the United Arab Emirates, serves as a vivid example of corporate planning aimed at an economically viable creation that depends exclusively on the ownership of a natural resource desperately needed by other nations.^{19,20} While the design aims at addressing pressing issues of sustainability so relevant around the globe, the sheer premise of locating a hub of specialized workforce in one of the most unsustainable places on the planet, coupled with an absolute lack of natural resources not only to produce goods but more importantly to feed its inhabitants, borders on the planned obsolescence strategy disguised as an economic investment in the future of the country.

Since technology changes rapidly and construction financing depends on an unsustainable and finite resource in a politically unstable region, this new city project might become obsolete before being fully developed, the investment corporation could become insolvent during the next financial crisis²¹, or the inhabitants might simply not accommodate into their artificially created reality.²²

However, even if it succeeds, Masdar might be a precursor to a city model that is self-contained not only in the use of energy, water needs, and waste removal but most notably in the way it breaks continuity of cultural landscapes. Its physical content has little cultural value beyond an expiration date dictated by the next best use of a particular space. Any building feature might be upgraded to realize specific efficiency gains, any apartment refurbished to serve the next generation of workforce, and public space reworked to respond to new trends and fashions dictated from above, not from within; all that by eliminating the memory of the past just like exchanging an older model of a smart phone for a new, more intelligent device.

Traditionally, cities developed over time almost organically and by responding to a variety of internal and external stimuli; they are shaped by the blood, sweat, and most importantly the passions of its inhabitants - not the passions of corporations. In the case of Masdar, the **transplantation** of continuity of cultural landscapes does not have a context to fit into. What worked for New York City will certainly have a much more difficult chance of succeeding in a place that has no meaningful connection to its natural environment, virtually no cultural identity beyond corporate branding, and a future dependent on a delicate balance of forces that cannot be controlled.

Yet, this is precisely where we as architects and educators are headed: the new brave world of planned obsolescence that can potentially break cultural landscape continuity by treating architectural design like industrial/product design.