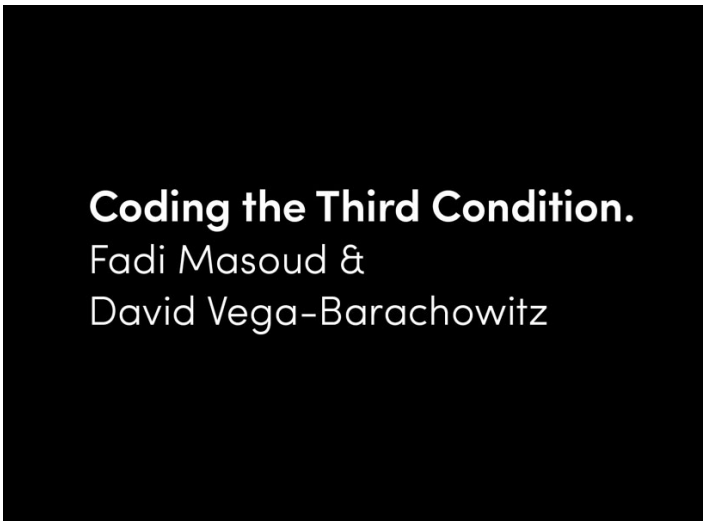
urbanNext Lexicon



CODING THE THIRD CONDITION

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State simplifications can be considered part of an ongoing "project of legibility", a project that is never fully realized... The radically simplified city plan, provided it is viewed from above, is practical and efficient... The logic behind the spatial segregation and zoning is at once aesthetic, scientific, and practical... it led to visual regularity – even regimentation... it reduced the number of unknowns, for which the planner had to find a solution... too many unknowns in urban planning rendered any solution problematic, or else requiring heroic assumptions... urban planning, is a short step from parsimonious assumptions to the practice of shaping the environment, so that it satisfies the simplifications required by the formula... Compared to uniformity, diversity is always more difficult to design, build, and control.

Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed – James C. Scott.

Zoning was the heaven-sent nostrum for sick cities, the wonder drug of planners, the balm sought by lending institutions and householders alike. City after city worked itself into a state of acute apprehension until it could adopt zoning ordinance.

Mel G. Scott, 1969 American City Planning Since 1890.

With a T-square and a triangle, finally the municipal engineer could, without the slightest training as either an architect or a sociologist, 'plan' a metropolis, with its standard lots, its standard blocks, its standard street widths, in short with it standardized, comparable, and replaceable parts...

Lewis Mumford, 1961 The City in History.

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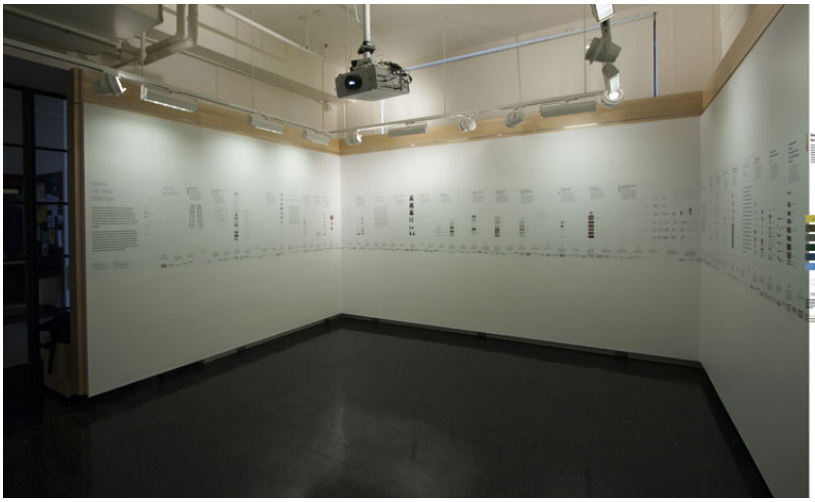

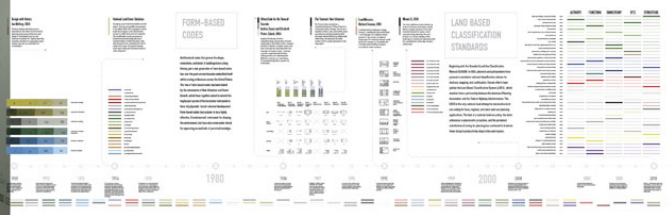

Over the last three centuries, a set of instrumental and reductive tools emerged in pursuit of simplification, legibility, and control over territory. From the early surveyors' metes and bounds system to the Jeffersonian grid, complex systems of subdivision, land use controls, building codes, special districts, and Euclidian zoning have evolved into the DNA of North American urbanism. The institutions of land use regulation arrived in North America from Germany in the first decade of the twentieth century. On a continent abounding in open land, grounded in an agrarian economy, and characterized by persistent fears of density, racial and ethnic intermingling, and a strong foundation in private property rights, land use controls were enthusiastically adopted. A clear product of the influence of ecological paradigms on American law and policy, zoning remains the most influential and pervasive regulatory tool ever deployed. It is largely responsible for the shape of twentieth-century land development in North America, and to some degree, planning regimes around the world.

Despite the blame so often cast on it, from social malaise to environmental degradation, to social fragmentation, Euclidean zoning has proven remarkably durable as an institution. Through its successive iterations and elaborations, from incentive to performance to overlay zoning, it has remained steadfast in its original goal: the well-defined separation of the uses of land. Such normative divisions have produced static conditions that overlook local nuances, and are especially unmindful to factors of time and change. Ultimately, these instruments have proven marginal in dealing with the *"complex and unwieldy reality"* of contemporary urbanism, especially in the face of increased vulnerability created by indeterministic, unknown, and unpredictable environmental forces. It is no coincidence that some of the most dynamic and variegated urban conditions, such as

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post-industrial sites, historic urban cores, dynamic estuaries, peri-urban fringes, and informal settlements, resist zoning's reductive categorizations. It is in those conditions where design innovation renders such legislative standards irrelevant and inapt. It is in the relative absence of such recognizable order and hierarchy, on the fringes of the poly-nodal metropolis or on flood-prone coastlines, where conditions become ripe for programmatic flexibility, social and spatial experimentation, and economic innovation.

By extrapolating the legends of land use maps along a timeline, the research for "Coding the Third Condition" revealed the often reductive, scientific rationality of the code in contrast to the fluidity of natural processes and human conditions. As a lineage of graphic conventions, the timeline provides a historical framework in which to situate a projective series of codes that combine environmental indeterminacy with physical planning policy.

As codes have become more complex, the essential elements of the land, critical in early surveying, have become obscured and secondary. Charting the historical development of codes and standards, we see two conditions emerge over time. The first condition is the regulation of land—the demarcation of borders across a territory. The second is the regulation of use—the definition of program within prescribed boundaries. This research proposes a third condition, rooted in the inherent fluctuations between land and use—that fundamental relationship, so often overlooked between them. In the *third condition*, program and use are governed by the evolution and flux of the land. The pantone-color reductivism of conventional land use hierarchies thus fades into a series of complex gradients that elicit multifunctional, dynamic readings of land use absent from present regulation.

The timeline is broken into seven main themes. These themes correlate with time periods generative of the various legislative acts, standards, and ordinances that shaped land use regulation as an institution. Each section reflects the thematic underpinnings of urbanization and its processes during that period.

Roi Salgueiro | Third Condition

Surveying

"*Acts of Surveying*" is defined by the continental scale assessment and management of land. The

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1785 United States Public Land Survey, which segmented lands west of the original colonies into square townships subdivided into one-square mile grids, drastically differed from the seemingly inefficient Metes-and-Bounds survey before it. Where once land boundaries had been sensitively determined though the study of the land, its contours, the location of monuments, natural or artificial, the ordinal system produced land patterns of endless regularity.

Download the Third Condition timeline (29 Mb)

Gardens, Lights and Air

"*City and Garden Codes*" emerged in response to the rapid expansion of industrial cities in the United States and Europe during the mid-to-late nineteenth century. This expansion precipitated widespread concern over overcrowding, disease, and antisocial behavior. Reformers and intellectuals of the era reacted to the pitfalls of urbanization by proposing a series of progressive utopian programs, which collectively reframed society's relationship to its environment. These utopian ideals, the earliest of which called for communal land ownership and industrial satellite cities, ultimately promoted the dispersion of the population across the hinterland to redress the squalor of the burgeoning slums. At the same time, early city planners and landscape architects like Nolen, Olmsted, Cleveland, Kessler, and Eliot, drafted city plans for cities and towns across the county. These plans articulated a framework of environmental, hydrological, and circulatory systems as a foundation for the future development and expansion of the urban regions. Yet in the absence of a professional planning institution or legislative "enabling tools," the vast majority of these plans remained on paper.

In the early 20th century, institutionalized "*Codes of Light and Air*" took root. The unabated growth of cities in the United States, and of New York City in particular, prompted lawmakers to pass the first zoning regulations in 1916. While these regulations sought to prevent the kinds of skyscraper canyons then casting Lower Manhattan in shadow, zoning advocates quickly expanded its reach into planning and reform. By the 1920s, following the passage of the 1924 and 1927 Standard State and City Zoning and Enabling Acts and the seminal Supreme Court decision of Euclid v. Ambler Realty (1926), zoning had proven itself capable of regulating industry and nuisance, ensuring lower densities, and protecting well-to-do single-family residential districts. In this process, zoning assumed a more pernicious character - the exclusion of certain races and social classes, the

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homogenization of neighborhood form, and regulated waste of land.

The Comprehensive Code

With the advent of the automobile, suburban expansion and urban renewal gave rise to a new set of codes for street networks, highways, and off-street parking. The 1956 Interstate Highway Act and landmark Federal Housing Acts in 1949 and 1954 set in motion urban renewal programs that reconfigured major US cities from the 1950s through the 1970s. Highway and urban renewal funds, often with little relationship to land use, displaced thousands of people, uprooting many ingrained communities of color, while tearing districts of the city apart from one another permanently. Urban renewal opened the doors to test modern ideas of city making and city form, resulting in changed landscape of modern office buildings, housing towers, shopping atriums, one-way streets, and multi-level parking edifices.

In 1969, the Cuyahoga River outside of Cleveland, Ohio caught fire. Pollution, once seen as a necessary consequence of industrial prosperity, gave way to a $100 million public bond initiative to fund the river's cleanup, signaling the start of widespread environmental regulations and planning and the potentials of *"Coding with Nature".* As the urban renewal era and the modernist movements came under increasing scrutiny from both citizens and academics, practitioners devised new modes of analysis and engagement to better comprehend both communities and environmental processes. The critiques of Jane Jacobs and Susan Sontag in the early 1960s, followed by the tumultuous race riots and environmental crises of the late 1960s catalyzed a paradigmatic shift away from the precepts of modernism towards counter-movements based in social and environmental justice.

Classification and Standardization

Beginning with the Standard Land Use Classification Manual (SLUCM) in 1965, planners and policymakers have pursued a consistent national classification scheme for land use, mapping, and codification. Recent efforts have yielded the *"Land Based Classification System"* (LBCS), the result of a partnership between the American Planning Association and the Federal Highway Administration. The LBCS is the only national-level attempt to standardize land-use coding for local, regional, and state land-use planning applications. The lack of a national land use policy, the static adherence to

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planometric projection, and the persistent substitution of zoning for planning has continued to frustrate those trying to productively shape cities and regions. Where attempts have been made to change the system, they have often come up short or focused on superficial, rather than systemic, issues. The movements of New Urbanism and Smart Growth, which have together aimed to exert control over the haphazard "sprawl" of the horizontal metropolis, favor radial concentric, transit-oriented transects that not only overlook the complexity of contemporary land mosaics, but fail to recognize the latent potential of the urban fringe. *Form-based codes* that govern the shape, style, setback, orientation, and detail of buildings emerged as clever mutations in the code of the suburban fabric. Under the guise of carbon reduction through walkability, density was seen as the solution to the generic large-scale, car-dependent, master-planned unit developments of suburbia. Yet overtime these codes simply replicated the parochialism of zoning without resolving its excesses and deficiencies.

Coding Flux

While design and planning turned notions of sustainability and resilience through ecological and landscape urbanism into staples of pedagogy and (in some cases) practice, our regulatory and institutional tools have failed to keep pace with contemporary pressures and shifting ecological paradigms. The tools of the profession hinge on the idea of a perfected "end-state" reached through "successional equilibrium"[1]. This static end image continues to influence much of planning practice, even as we require a dynamic view of the environment, and, in turn, dynamic tools and policies. The final and projective piece of the timeline envisions techniques that incorporate elastic elements of ecological indeterminacy with the precision and instrumentality of planning tools—what we refer to here as the "*Third Condition*". This fluid codification scheme explores the potential to embed novel and unique land use standards that emerge from dynamic "process-driven" ecological paradigms rather than traditional static "object-based codification".

Nowhere is such a tool more profoundly needed than in South Florida. With nearly 20 million residents, Florida is one of the United States' fastest growing regions. Its ubiquitous suburban landscape is enabled by the continued manipulation of a dynamic estuarine environment and a pervasive real-estate-driven housing pattern. Thirty-five miles of levees and 2,000 hydraulic pumping stations drain 860 acres of water per day, resulting in the 'world's largest wet subdivision' with $101 billion worth of property projected to be below sea level by 2030. The overall structure

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that defines Florida's cities emerges from the combination of hard infrastructural lines, developer driven master plans, reductive normative zoning, and rigid form-based codes. These conventional tools have proven marginally effective in dealing with the increased vulnerability caused by Florida's inherently dynamic ecological forces and constantly fluctuating environment. This renders traditional static "object-based codification," which has defined much of contemporary urban design, inadequate and in urgent need of innovation.

In January 2010, the Southeast Florida Regional Climate Change Compact was executed by Broward, Miami-Dade, Monroe, and Palm Beach Counties to coordinate mitigation and adaptation activities across county lines. The Compact represents a new form of regional climate governance designed to allow local governments to set the agenda for adaptation while providing an efficient means for state and federal agencies to engage with technical assistance and support. In an ongoing collaboration with Massachusetts Institute of Technology (MIT), Broward County is serving as a test case for the exploration of a set of urban codes on a "Third Condition". In this case, the third condition is defined as a condition that is neither wet nor dry, but is in a state of constant flux. A novel urban code for Florida's third condition integrates the dynamic elements of Florida's ecological indeterminacy with the instrumentality and precision of conventional planning instruments.

Ongoing research and design work generated through the "Terra *Sorta* Firma - Coding Resilient Urbanism in South Florida" urban design studio has been gaining momentum and traction at a regional level in Florida. The studio, composed of planning and architecture students, and co-taught by Fadi Masoud, Adele Naudé Santos, and Alan Berger, looked at ways in which Broward and Palm Beach Counties may incorporate elements of dynamic ecological and environmental systems in the future design and planning of their counties. Earlier this year, Deputy Director of Environmental Protection and Growth Management in Broward County, Leonard Vialpando presented the work at the Regional Climate Action Plan Implementation Workshop: *Essential Tools: Integrating the Southeast Florida Sea Level Rise Projections Into Community Planning.* Key concepts such as clustering development along elevated transit corridors and ridges, inland islands generated through "flux zones", and the design of interconnected water corridors as open space, are all being discussed as near term adaptation strategies for the County. A second installment of the studio co-taught by Fadi Masoud, Lecturer of Landscape Architecture and Urban Design and Miho Mazereeuw, Assistant Professor of Architecture and Urbanism and Director of the Urban Risk Lab is currently investigating the potential of coding resilient urbanism along the C-11 Canal in Broward County.

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Download the Third Condition display (19Mb)

As part of the design process, the team devised a set of unique resiliency zoning, codes, land uses, programs, and typologies that are precise yet dynamic, flexible, and responsive. These are presented in a looping animation—a conceptual attempt to generate a dynamic code that combines various landforms / infrastructures within a relational land use matrix that changes according to a single variable (water level). The combination of measured and precise hydro-engineering metrics from agencies such as the South Florida Water Management District, environmental and geologic cartographic overlays from the County and USGS, as well as existing and proposed land use zoning, allows for novel codification strategies. By incorporating the indeterminacy of broader environmental systems with the pervasiveness and exactitude of the planning code, we establish an opportunity for the instrumentality of policy to be a part of the design process and a progeny of it.

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