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Real Estate and Liquid Architecture

DAMON RICH

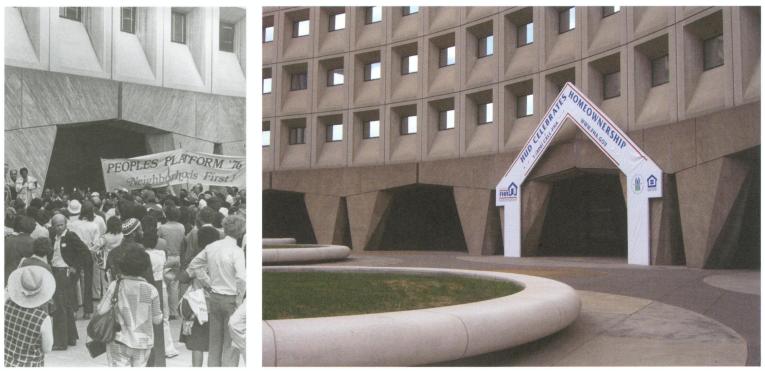


Fig. 1: Left: Members of National People's Action outside of the HUD building, 1976. Right: "HUD CELEBRATES HOMEOWNERSHIP," 2007.

Mortgage risk lies in the future. — Federal Housing Administration Underwriting Manual, 1936

The American preference for traditional home design masks a centurylong change in the role of buildings. Public power, exerted through government, joined with digitized financial markets to transform individual houses from distinct objects to exchangeable nodes within a global structure. This structure connected the built environment to new forms of investment, and directed these funds in the development of hundreds of millions of acres of post-World War II landscape.

The interface between capital markets and buildings is not metaphorical; it is carried out by identifiable actors found in specific places. Builders, lenders, brokers, bankers, insurers, traders, regulators, buyers, and sellers—the social worlds of real estate—work in loose coordination to plan, finance, and build. At the same time, the growing scale of the housing finance and development industry has opened it to challenge by democratic movements demanding that its logic not be determined exclusively by market forces.

While the mechanisms and instruments of home finance-from property appraisals and bank regulation to Real Estate Mortgage Investment Conduits and collateralized securities-extend beyond the discipline of architecture, these abstractions, designed to carry value from a singular site to broader markets, rely on the materiality of buildings for their reference and justification. In the aftermath of the tremendous speculative bubble's collapse, it is plain to see that the highest-soaring financial follies stay firmly tethered to the physical houses whose conditional ownership secures their securities. When payments promised to investors fail to flow, these tethers become the line through which their control is transmitted, leaving undeniable physical impacts in the form of "Real Estate Owned" houses, foreclosed and vacant.

The following three narratives address the development of specific mechanisms connecting buildings to larger and more abstract financial structures, from design guidance provided by insurance and lending requirements to new technologies for visualizing financial dynamics on a national scale. One way to tell the story of architecture and finance without economic determinism is to start from moments when existing relationships between buildings, money, and politics were identified, challenged, and reworked.

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1. REAL ABSTRACTION

Before thought could arrive at pure abstraction, the abstraction was already at work in the social effectivity of the market. —Slavoj Zizek on Alfred Sohn-Rethel, The Sublime Object of Ideology



Fig. 2: Middlesex County Registry of Deeds, Cambridge, Massachusetts.

Theories of property—who owns what and what they can do with it hitch buildings to legal and financial systems. Real property, as opposed to personal property, includes land and things attached to it. While built on centuries of common law, a system of real property depends on continuously updated record-keeping. The registration, storage, and verification of official information on land ownership make up the program of the Hall of Records. Administered by each of the 3,077 counties of the United States, here one finds the Registry of Deeds and Mortgages. At the Middlesex County Registry of Deeds in Cambridge, Massachusetts, the Plan Department holds drawings of land parcels defined by stumps, stones, rivers, hills, and trees—minimal nature scenes writing lines of property onto the landscape.



Fig. 3: Plan Department, Middlesex County Registry of Deeds, Cambridge, Massachusetts.

The deeds, bound in books chronologically numbered by filing date, reference the plans to connect particular buyers and sellers to their parcels.

On an open floor, title searchers trace ownership transfers through time, watching for "wild deeds" and ensuring that the chain is clear and uncontested before purchase.

Under the central dome, buyers and sellers close deals.

Cross-referenced to the deeds are records of mortgages on the properties. Like the Hall of Records itself, the security of private mortgages is a public service provided by the state and its legal system. A mortgage hedges the risk that the borrower will not repay his debt and entitles the holder to use the force of the state to satisfy his claim to the property. Beneath the tranquility of everyday operations at the Registry of Deeds lies a history of violence.



Fig. 4: Daniel Shays and Job Shattuck, two of the Shays Rebellion Regulators, from a 1787 woodcut on the cover of Bickerstaff's *Boston Almanack*.

In 1786, Massachusetts farmers, back home from the American Revolution, marched on local courthouses to interrupt foreclosure proceedings. Postwar taxes were high to defray the cost of the war and the state government refused demands to issue paper money, leaving debts payable only in scarce gold and silver. As farmers failed in covering their mortgage payments, foreclosures spread. Eventually, the veterans rebelled.

They called themselves Regulators, and their emblem was a sprig of hemlock. Advancing from town to town, they chased out lawyers, destroyed court records, and restored foreclosed lands to their previous owners. Daniel Shays, veteran, farmer and local official, led a group of 1,200 men from Western Massachusetts towards Boston. They came to Concord, the location of Middlesex County's courthouse, and set up camp on the Concord Green. In response, authorities quickly removed the court records from Concord.

The Commonwealth authorities, taking advantage of the fact that Middlesex County borders on Boston, reconvoked court session for Middlesex County at Lechmere's Point, a swamp region on the Cambridge shore of the Charles River, highly inaccessible from Middlesex proper, though actually in a corner of the county, *but within sight and gun range from Beacon Hill in Boston*. This had the desired effect of bringing the court out of danger from the rebels, although the location was extremely out of the way; in fact, its being out of the way from the body of the county was, under circumstances of rebellion, a desirable feature from the authorities' point of view...the courts of Middlesex County have to this day remained where they fled during the Shays Rebellion, on the former site of Lechmere's Point now filled in and known as East Cambridge.¹

The relocation of the Middlesex Registry of Deeds is a monument to the mortgage's contested power, one small modification in the continuous adaptation of a system of power to threats of disruption: a demonstration of how architecture instantiates the social facts

produced by the market. Although we know that deeds are not equivalent to buildings—papers do not physically alter houses or change their locks—the program of the Registry of Deeds orchestrates a series of straight-faced interactions among people who act as if these statements are true. In this sense, architecture structures a world of *real abstractions*, the world within which the history of modern home finance takes place. When Walter Benjamin joined the mass perception of movies and architecture as "consummated by a collectivity in a state of distraction," his point was not that architects should aim to impact reality by breaking through the bubble with audacious visuals, but rather that it might be possible to work in ways that manipulate how social life, built on real abstractions, is structured.

2. SAFE AND SOUND ARCHITECTURE

In the valuation of a home, the returns which are forecast are amenities—sunshine, shelter, comfort, warmth, beauty of surroundings, and congeniality of neighbors. Such returns are, in theory, discounted to an equivalent present money value in the form of a price for the home. This is precisely what the market does. —Frederick Babcock, The Valuation of Real Estate, 1932

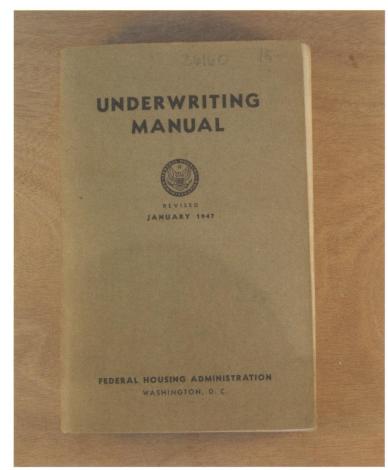


Fig. 5: Federal Housing Administration Underwriting Manual, overseen by Chief Underwriter Frederick Babcock (1947 revision).

The Underwriting Manual of the Federal Housing Administration, first assembled in 1936, provides step-by-step instructions for connecting buildings to the publicly restructured mortgage markets of the New Deal. This newfound comparability of mortgages defined by risk-profile, and, by extension, the translation of individual buildings into an abstract language of value, establishes the possibility of trading the conditional ownership of thousands of buildings with the single push of a computer button.

The Manual is part of the new program of government mortgage insurance. Under the program, administered by the newly constituted Federal Housing Administration (FHA), if a borrower fails to repay a loan, the lender is reimbursed from a pool of premiums. For a slight fee assessed on every insured mortgage, lenders share the risk of default. Barring a systematic failure, there is always enough money in the common pool to satisfy claims. To reimburse the pool after a loss, the FHA receives title to the property so that it may be sold. Faced with the potential of owning land and buildings wherever it extends insurance, the federal government initiates programs to understand the future value of real estate; the Manual is prominent among them.



Fig. 6: 1930s-1940s housing brochures from the National Archives. Buildings are depicted as plants nourished by money and modern machinery.

FHA insurance accompanies other key New Deal innovations in structured financial cooperation, including a system of Federal Home Loan Banks to increase the supply of capital for mortgage lending; a Home Owners' Loan Corporation to modify loans at risk of default; special advantages given to Savings and Loan banks for providing affordable mortgages; and the Federal National Mortgage Association to open mortgages to new sources of investment. Together, these initiatives reshape the way that Americans pay for their homes. Before 1930, most home loans came due in seven years or less. The loans carried large balloon payments at expiration, requiring borrowers to refinance immediately or default. After these New Deal interventions-which did not replace the private market but used public power to support and channel it—purchasing a home became more affordable and less risky. The new mortgages carry lower interest rates and longer terms, resulting in lower payments, and are self-amortizing: the loan is paid off by a series of regular, level payments, bringing the balance to zero at the end of twenty or thirty years. Like FHA insurance, the new mortgage system spreads risk among private actors and public bodies, demonstrating that social coordination can support, extend, and improve the distribution of resources by markets.

The concept of the "conforming loan" unifies the new processes of home finance and determines which borrowers are suitable for participation. The analytic method described by the *Underwriting Manual* determines whether a particular mortgage conforms by quantifying the factors that affect mortgage risk.

Data, analysis, and judgment are the basic elements of the FHA risk-rating system. The system is so designed as to require the assembly and analysis of pertinent mortgage risk data as a means of ascertaining and assigning a numerical rating to the degree of risk characterizing any particular mortgage.²

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Here, risk refers to future financial flow: the probability that mortgage payments will be made, and if not, the probability of selling the property to recoup the loan amount. The three divisions of the FHA underwriting operation—the Architectural Unit, the Valuation Unit, and the Mortgage Credit Unit—constitute a machine for translating qualities of buildings into checklist evaluations of financial risk.

The rubric for the FHA's architectural standards is "physical security," materiality as a minimum standard of insurability.

Architecture Analysis relates solely to the physical security for mortgages, the insurance of which is requested. The term physical security refers to the entire property within the lot boundaries, including the land, buildings, and appurtenances. These physical elements are analyzed from the viewpoint of their quality as mortgage security.³

Physical elements examined include "Visual Appeal of Property," "Livability of Property," "Natural Light and Ventilation," "Structural Quality," "Resistance to Elements and Use," and "Suitability of Mechanical Equipment." Together, these qualities of building performance define an alternative *Existenzminimum*—architecture as risk profile.

Risk, defined in terms of financial return, requires reconciliation with the market. The *Manual* bases its aesthetic judgment on the "likelihood of continuing marketability."

The rating of feature Visual Appeal of Property shall reflect the extent to which the appearance of the property as a whole is likely to retain market appeal. A high rating is indicated when it is expected that the general appearance of the subject dwelling and its surroundings on the site, and the design of its interior, will remain attractive to the market for a substantial portion of the term for which a mortgage may be insured.⁴

Although expressed in economic terms, the FHA's Architectural Analysis is resolutely social, locating architectural value in desire aroused by market appeal.

While the *Manual* judges visual quality for the most part only through its market performance, some passages elaborate particularly laudable characteristics.

PHYSICAL SECURITY FEATURES	REJECT	1	2	3	4	5		ting ctors	Totals
Visual Appeal of Property		4	3	2	1	0	×	1	
Livability of Property		4	3	2	1	0	×	8	
Natural Light and Ventilation		4	3	2	ı	0	×	2 =	
Structural Quality		4	3	2	1	0	×		
Resistance to Elements and Use		4	. 3	2	1	0	×	3 =	
Suitability of Mechanical Equipment		4	3	2	1	0	×	ł	8
Order of assignment of Rating Factors: 6-4-3-2	Total Deductions								
RATING OF PHYSICAL SECURITY Maximum possible rating 100 minus Total Deductions									
Adjustment for Nonconformity	Reject	24	1	8	12	6	0)	(P)
RATING OF PROPERTY	Rating of Physical Security minus Adjustment for Nonconformity								allind locality according allow

Fig. 7: Physical Security Rating Grid, FHA Underwriting Manual (1947 revision).

Simplicity is freedom from complexity, intricacy, and elaborateness. It does not mean mere bareness, but rather the avoidance of excessive embellishment, of features and motifs which compete for attention, of the meaningless use of ornament, of immoderate variation and inappropriateness in the use of materials as well as of architectural features, and of exaggerated effects.⁵

Consistent with the risk-managing strategy of defining a range of acceptable performance and remaining agnostic on how it is achieved, even the strongest stylistic prescriptions are expressed in subtractive terms, as qualities to avoid.

At the scale of the neighborhood, the FHA endorses a pluralism of traditional styles:

Conformity of exterior design of a structure with other structures in the immediate neighborhood is not important except in so far as it fails to blend harmoniously with them...For example, if a two-story Colonial residence were erected in a neighborhood characterized by one-story Spanish bungalows, it is probable that this property would be unattractive to prospective occupants, irrespective of the excellence of its individual design.⁶

Visual integration leads to social integration. Vision deciphers value. Harmony appears as an overarching criterion, aesthetically expressing visual quality and social cohesion. Conforming loans require conforming people.

Concerns about the context of a property are treated through Location Analysis "to determine the degree of mortgage risk introduced in a mortgage insurance transaction because of the location of a property at a specific site."⁷ In a neighborhood, beyond the relative permissiveness of "harmony," which requires at least two notes, the *Manual* recommends the maximization of homogeneity:

Homogeneous development of properties in a neighborhood tends to reduce mortgage risk. Areas which contain structures of about the same age, price range, and offering approximately similar accommodations usually are better mortgage lending areas than those having a variety of types and age groups.⁸

SITE DESIRABILITY FEATURES	REJECT	1	2	3	4	5	Rating Factor	
Protection Against Inharmonious Land Uses		4	3	2	1	0	× =	
Physical and Social Attractiveness		4	3	2	1	0	× =	
Adequacy of Civic, Social and Commercial Centers		4	3	2	1	0	× =	
Adequacy of Transportation		4	3	2	1	0	× =	
Sufficiency of Utilities and Services		4	3	2	1	0	× 3 =	
Level of Taxes and Special Assessments		4	3	2	1	0	× 2 =	
Order of assignment of Rating Factors: 6-4-3-2								
RATING OF SITE DESIRABILITY Maximum possible rating 100 minus Total Deductions								
Relative Marketability		24	18	12	6	0		
RATING OF LOCATION	Rating of Site Desirability minus Adjustment for Relative Marketability							

Fig. 8: Location Rating Grid, FHA Underwriting Manual (1947 revision).

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The vision of a neighborhood of houses at a uniform price point, built at the same time, of the same basic type, grows directly out of the FHA's primary concern for risk management. By eliminating unpredictable interactions between people of different classes and buildings of different age and type, the FHA sought to secure a socialized investment in the built environment. At the same time, it set a pattern of suburban development and urban disinvestment that continues to mount in its negative impacts, from carbon emissions to income inequality.

Not all the damage was done unwittingly. In part due to its concern with markets, the FHA chose to accommodate and sustain social prejudices rather than challenge them. Although altered in later editions, the 1938 *Manual* straightforwardly instructs underwriters to look out for undesirables:

Areas surrounding a location are [to be] investigated to determine whether incompatible racial and social groups are present, for the purpose of making a prediction regarding the probability of the location being invaded by such groups. If a neighborhood is to retain stability, it is necessary that properties shall continue to be occupied by the same social and racial classes. A change in social or racial occupancy generally contributes to instability and a decline in values.⁹



Fig. 9: Block map used by the Mortgage Conference of New York, 1940.

The FHA goes so far as to recommend the use of racially restrictive covenants, reversing its policy only after the Supreme Court strikes down their enforcement in 1948.¹⁰

The implicit justification of these policies — minimizing mortgage risk by anticipating racist consumer preferences — obscures how markets are socially produced. Rather than existing unaffected by racial and social prejudice, particular real estate economies thrive on racial antagonism. A 1922 report by the Chicago Commission on Race Relations explained how low security ratings led to higher profits:

An important factor in the housing problem is the low security rating given real estate loan concerns to property tenanted by Negroes. Because of this Negroes are charged more than white people for loans, find it more difficult to secure them, and thus are greatly handicapped in efforts to buy or improve property."¹¹

The report remarks on the intertwining of perception, interpretation, vision, and value: "Whatever depreciates real estate necessarily depresses its security value whether the cause be fact or opinion."¹²

The conflation of facts and opinions by the market mechanism makes for power-evasive explanations of urban dynamics. When the Mortgage Conference, a group of the largest real estate lenders in New York City, commissioned block-level "population surveys" that distinguish blocks without blacks, blocks with a "presence of Negroes," and blocks that are "predominantly Negro," they used the visual logic of racism to read the city—a visualization of value useful for either avoid-ing mortgage risk or profiting from it.¹³

Perhaps the most magisterial work of urban risk mapping of American cities was a series of drawings produced by the Home Owners' Loan Corporation and the FHA in consultation with real estate brokers and lenders in 232 cities. Called "residential security maps," each divided their territory into four levels of color-coded risk, green to red, representing a particular stage in each neighborhood's life cycle. Those who might be responsible for causing this deterioration, or for fighting it, remain unrepresented.

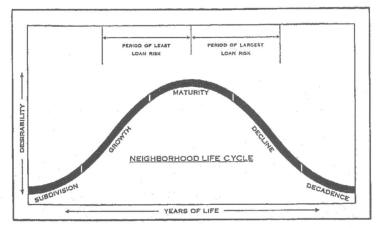


Fig. 10: From L. Elden Smith's "Measuring the Neighborhood Risk," published in *Insured Mortgage Portfolio* in 1938. Like other early attempts at standardizing the valuation of real estate, Smith makes use of the concept of a "neighborhood life cycle."

3. VISUALIZING THE FINANCIAL LANDSCAPE

The city is our life. We don't want to live anywhere else. No one is going to push us out, whether it be government, realtors, or the big money combines who think they are controlling our lives. Changing neighborhoods and deteriorating cities are not natural. It's a plan and somebody is making money out of changing neighborhoods.

-Gale Cincotta, National People's Action, Housing Training and Information Center, 1972

After four decades of operation, the gaps and inequalities in the new system of home finance became increasingly visible on the landscape. To contend with them, a new national organization learns to

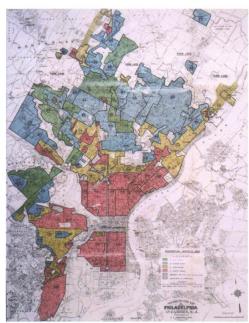


Fig. 11: Residential Security Map of Philadephia prepared by the Home Owners' Loan Corporation, 1937.

visualize the financial architecture of neighborhoods and fight to change it. In 1971, The National Survey of Housing Abandonment attempts to trace power relations and policy decisions back through their architectural outcomes. As the underwriting standards of the FHA found legitimation in a theory of neighborhood made visible by the in-migration of blacks, *The National Survey* put forward a theory of disinvestment for which the vacant house serves as icon.¹⁴

While investment leaves a trail of positive facts-a loan is made and recorded, a building is financed and built-disinvestment is not so simple to see; it indicates things not done, loans withheld, repairs unmade. The report explains the cause of the extreme architectural outcome of this process-the abandoned house-as plainly "a failure of financial institutions." The neighborhood life-cycle theory embraced by the FHA, in its partnership with the real estate industry, suggests that empty and dilapidated buildings signal the natural death of a place. The National Survey suggests a counter-interpretation: when you look at an abandoned building, you see a financial network of power relations.

At the time, neighborhood-based organizations in many American cities were focused on the fallout of the FHA scandals of the late 1960s, and building their understanding of urban real estate markets.¹⁵ In only a few years, these organizations would form a movement to craft laws that would make disinvestment more directly observable in the records of banks. The movement was born, as was the modern real estate industry and the ecological model of urban development, in Chicago, and was fed by a network of community-based

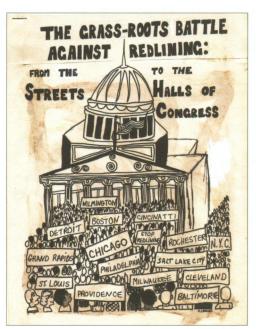


Fig. 12: Housing Training and Information Center pamphlet.

organizations founded or influenced by Saul Alinsky, the criminologist turned community organizer. In keeping with Alinsky's methods, the Northwest Community Organization identified a series of complaints against local bank practices—refusals of business loans justified by the neighborhood being a "riot area," as well as insistence on loaning exclusively in the suburbs—and took direct action. The original "Bank-In," reputedly devised by an elderly Polish woman inspired by "What those Spanish people do" at civil rights sit-ins. The group succeeded in its demands for the bank to commit to making loans available locally.

At the 1972 National Housing Conference...Platform for Survival, 3,000 attendees heard about issues affecting their neighborhoods: Real Estate Practices, Open Housing, Direct Action, FHA, and Mortgages. Under

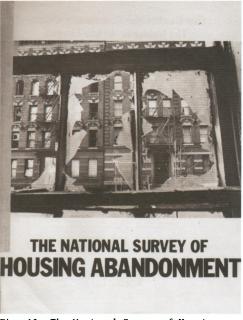


Fig. 13: The National Survey of Housing Abandonment, Center for Community Change and National Urban League, 1971.

the slogan "Neighborhoods First!" the group demanded *disclosure*. Later, this became the name of the newsletter published by the two organizations born at the conference: National People's Action on Housing—to lobby and advocate for change—and the National Housing Information Center—a study center and clearinghouse for groups doing work on housing.

We've called this newsletter *Disclosure* not only because it's our major demand on redlining but because it stands for our right to know on all these issues. In this post-Watergate era, we must have accountability. We have a right to know where our savings and rent go; who is making money off of our lack of adequate housing.¹⁶



Fig. 14: National Housing Conference, Chicago, Illinois, 1972.

The demand for disclosure was not only post-Watergate, but more significantly for architects, it was post-Urban Renewal. Under the regime of that federal program to rebuild cities, officially terminated in 1973 by Nixon, the government was the most visible and vulnerable target for opponents of large-scale urban restructuring. Once abandoned in favor of less-targeted Community Development Block Grants, narratives of resistance had to be retooled for a situation where the market is the most prominent mechanism of neighborhood change.



Fig. 15: Disclosure, Issue 1, Housing Training and Information, 1974.

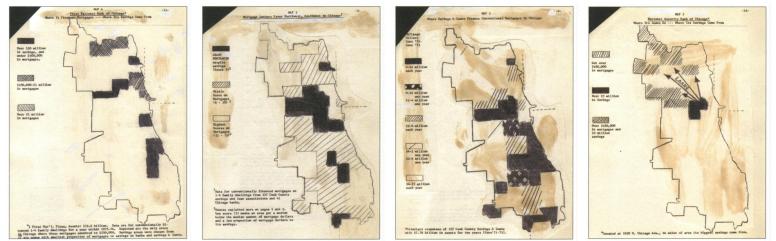
The problem that disclosure addresses is "redlining." Of indeterminate origin,¹⁷ the word is used to refer to maps—real or fictional containing red lines around the neighborhoods where banks refuse to lend. Disclosure—the public release of data on where banks take deposits and where they make loans—attempts to fight the problem with transparency, and shows how financial institutions systematically transfer resources from areas within red lines to those beyond them.

After a series of local wins, National People's Action approached Senator William Proxmire, a Minnesota liberal who chaired the Senate Committee on Banking. Upon seeing an anonymous study of where Chicago banks took deposits versus where they made loans, Proxmire agreed to sponsor the Home Mortgage Disclosure Act (HMDA) in 1975, requiring banks to publicly report information about home loans. The first draft (reputedly written on the basement floor of a rectory between 12 and 4 am by ten people with two bottles of Jack Daniels) demanded extensive disclosures about deposits and loan applications granted and denied, census tract by census tract. The bill was weakened before passage—only successful home loans were required for reporting, and on a zip code level—but still provided a new way for residents to monitor the financial dynamics of their neighborhood.

Once HMDA was law, the data it generated could be used to draw pictures of financial dynamics in cities across the country. Using markers and acetate, advocates produced maps overlaying lending activity with race and income information. The images revealed the uneven landscape of investment and disinvestment. Cities were losing resources to suburbs, and non-white and working-class neighborhoods were hit the hardest.

Armed with HMDA data, the anti-redliners returned to Congress and demanded action. This time, they proposed a Community Reinvestment Act (CRA), requiring lenders to define a service area and target a proportion of deposits for reinvestment there. As passed in 1977, the law loftily prescribed that 'regulated financial institutions have a continuing and affirmative obligation to help meet the credit needs of the local communities in which they are chartered." While the law directed federal bank regulators to draft rules that would ensure that banks help meet community needs, it offered little leverage to ensure its enforcement. In theory, the financial system would integrate a new democratic technology, creating capacities and feedback loops to support a nascent concept of financial justice. In practice, however, the law was barely effective for a decade due to inaction and loose regulation by Reagan administration agencies. It was not until another real estate emergency, the Savings & Loan Crisis of the late 1980s, that an opportunity arose to reform CRA so that advocacy organizations would be able to challenge plans of financial institutions to merge or make acquisitions.

Throughout the campaigns for HMDA and CRA, real estate and banking lobbyists opposed the new regulations, claiming that market forces should lead the way and that banks should not be directed by political desires, expressed either through government or pressure groups. Grover Hansen, president of the largest Savings & Loan association



Figs. 16a-d: Maps prepared by National Training and Information Center (formerly Housing Information and Training Center) on disinvestment in Chicago, c. 1974.

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in Illinois, testified to Congress that if HMDA data were used "to foster narrow, parochial, selfish interests, many of the gains achieved by savings and loan associations in their serving of the public, many of the gains achieved generally by our economic system, and many of the gains achieved by our social system will be dissipated." The Federal Reserve declared, "Improvements in the allocation of credit are more likely to be achieved by removing existing legal and regulatory impediments to the free flow of funds in markets than by adding new ones." To them, the social power behind the housing industry since the 1930s was strategically invisible.



Fig. 17: Framed copy of January 3, 1976 Chicago Tribune, NTIC office, Chicago, Illinois.

POSTSCRIPT: FORMS OF VALUE

If we say that, as values, commodities are simply congealed quantities of human labour, our analysis reduces them, it is true, to the level of abstract value, but does not give them a form of value distinct from their natural forms. -Karl Marx, "The Value-Form, or Exchange-Value," Capital

The current economic calamity—variously called Subprime Meltdown, Credit Crunch, or the Great Recession—grew directly from our system of financing buildings. To understand the role played here by these traditional objects of architectural inquiry requires an examination of the relationship between materiality and liquidity.

Harvard Business School Professor Arthur Segel, in the first session of his popular real estate course, explains that many challenges of real estate development arise from the fact that buildings and land rank among the *least liquid* of asset classes. The story of home finance in the 20th century—from the codification of appraisal to the crafting of exotic mortgage-based securities — may be told as a series of innovations in the liquefaction of architecture.



Fig. 18: Real Property, Harvard Business School, Fall 2006.

Economic sociologists Bruce Carruthers and Arthur Stinchcombe describe the process by which economic liquidity is produced:

Let us consider production of a liquid instrument as the production of a document or emblem recognizable by its formal features alone, regardless of its history or other features, that is accepted by a wide variety of people or organizations (and in particular by a capital market) as a valid economic claim. Thus a dollar bill is a liquid social emblem. The process of turning out such liquid instruments and endowing them with exchangeable value we might call, by an obvious analogy, "minting work" on a given claim. We argue that organizations perform minting work on a claim like a mortgage by actively stripping it of its distinctiveness and complexity, by "formalization."¹⁸

Against a popularized notion of neoliberal economics that holds that markets are naturally free—and free-flowing—until impeded by governance and regulation, Carruthers and Stinchcombe propose that liquidity exists only as the product of social intervention. Against an architectural notion that the interpretation of buildings in economic terms necessarily overlooks the value of form, they argue that the production of liquidity is at base a formal procedure.

In *Capital*, Marx wrote at length on the role of form in the organization of material objects into economies. In the social exchange of commodities, the *natural form* of one object becomes the *value form* of another:

Not an atom of matter enters into the objectivity of commodities as values; in this it is the direct opposite of the coarsely sensuous objectivity of commodities as physical objects. We may twist and turn a single commodity as we wish; it remains impossible to grasp it as a thing possessing value. However, let us remember that commodities possess an objective character as values only in so far as they are all expressions of an identical social substance, human labour, that their objective character as values is therefore purely social.¹⁹

When a certain amount of linen is exchanged for a coat, each of the two material objects is transformed into a physical expression of the value of the other: "In this relation the coat counts as the form of existence

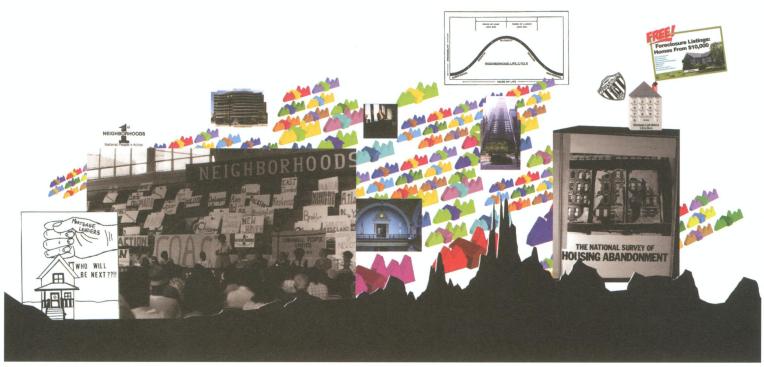


Fig. 19: Buildings as forms of value in a financial landscape.

of value, as the material embodiment of value, for only as such is it the same as the linen."²⁰ Like Carruthers and Stinchcombe, Marx cautions us not to analyze material objects in terms of value, whether linens or skyscrapers, while disregarding their formal existence. Instead, he urges us to understand how "natural forms" become "forms of value." Today, in a world where mortgages have been securitized to allow thousands of investors from across the globe to participate in the financing of a single building, the "natural forms" produced and contemplated by the discipline of architecture must race to adapt to these new "forms of value."

- 1. W.J. Sidis, The Tribes and the States (1935). [emphasis added]
- Federal Housing Administration, Underwriting Manual (Washington, DC: Revised January 1947), sections 211-214.
- 3. Ibid., sections 401-404.
- 4. Ibid., sections 417-418.
- 5. Ibid., sections 418-419.
- 6. Ibid., sections 1118-1120.
- 7. Ibid., section 1301.
- 8. Ibid., section 1302.
- Michael H. Schill and Susan M. Wachter, "The Spatial Bias of Federal Housing law and Policy: Concentrated Urban Poverty in America," University of Pennsylvania Law Review 143, no. 5 (1995): 1285-1342.
- 10. In the case of Shelley v. Kraemer, a white family in St. Louis sued to stop a black family from purchasing a neighboring house under a restrictive covenant barring sale to "people of the Negro or Mongolian Race." NAACP Special Counsel Thurgood Marshall won the Supreme Court decision, that the enforcement of such a covenant by the state violated the Equal Protection Clause of the Fourteenth Amendment.
- The Chicago Commission on Race Relations, The Negro in Chicago (Chicago: University of Chicago Press, 1922), 215-216.
- 12. Ibid.
- 13. Philosophically animating many similar readings of the built environment was the use of the concept of ecology to describe the evolution of cities. Writers such as Robert E. Park and Ernest Burgess saw the city as growing in a series of ocular rings, and posited a natural birth, life, and eventual death of neighborhoods, marked by their physical deterioration and inhabitation by sequentially lower social groups. This concept was particularly useful as a frame for theories of appraisal, which, like the Underwriting Manual, attempted to understand the dynamics of real estate prices. Frederick

Babcock, pioneering appraisal theorist and first Chief Underwriter for the FHA, described these dynamics as the "future histories" of neighborhoods.

- 14. Center for Community Change and National Urban League, The National Survey of Housing Abandonment (1971).
- 15. On the malfeasance at the FHA, see Boyer, Brian D. 1973. Cities Destroyed for Cash: The FHA Scandal at HUD. Chicago: Follett.
- Housing Training & Information Center, Disclosure 1 (July/ August 1974): 12.
- 17. Chicagoans claim having coined it in the 1970s while already it is used in the 1968 report of the Douglas Commision, The National Commission on Urban Problems.
- Bruce G. Carruthers and Arthur L. Stinchcombe, "The Social Structure of Liquidity: Flexibility, markets, and states," *Theory and Society* 28, no. 3 (June 1999).
- 19. Karl Marx, Capital: Volume 1 (New York: Vintage Books, 1977), 138.
- 20. Ibid.,141.