Radical Pedagogies: Re-imagining Architecture's Disciplinary Protocols

Beatriz Colomina
colomina@princeton.edu

Ignacio G. Galán
ignaciog@princeton.edu

Evangelos Kotsioris
ekotsior@princeton.edu

Anna-Maria Meister
ameister@princeton.edu

Princeton University
Princeton, USA

ABSTRACT
Radical Pedagogies explores a series of pedagogical experiments that played a crucial role in shaping architectural discourse and practice in the second half of the 20th Century. As a challenge to normative thinking, they questioned, redefined, and reshaped the post-war field of architecture. They are radical in the literal meaning stemming from the Latin radix *(root), as they question the basis of architecture. These new modes of teaching shook foundations and disturbed assumptions, rather than reinforcing and disseminating them. They operated as small endeavours, sometimes on the fringes of institutions, but had long-lasting impact. Much of architectural teaching today still rests on the paradigms they introduced.*

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The Radical Pedagogies project was born out of a deep interest in these historical experiments. It is an ongoing multi-year collaborative research project led by Beatriz Colomina with a team of PhD students of the School of Architecture at Princeton University. It has so far involved three years of seminars, interviews, archival research, guest lectures, along with contributions by protagonists and scholars from around the world. Radical Pedagogies has been presented as an expanding research platform at the 2013 Lisbon Architecture Triennale, the 2014 Venice Biennale (where it was awarded a Special Mention), and the 7th Warsaw Under Construction Festival.[1] In such research projects, architectural history and theory are taught and practiced as an experiment in and of themselves, exploring the potential for collaboration – in what is often taught to be an individual field – and addressing the challenges and opportunities of new media.

Radical pedagogies belong to a period of collective defiance against the authority of institutional, bureaucratic, and economic structures. The world as it was known underwent drastic transformations on all scales. The geopolitical landscape was completely reshaped by the Cold War, the Vietnam War and the Space Race, while many Latin American countries were shaken by succeeding revolutions and dictatorships. At the same time, the domestic environment was increasingly refurnished with objects of mass-consumable desire. Utopian technological prophecies, foretold in science fiction tales, manifested in a brave new world of computation, gadgets, and spaceships. Architecture was anything but impervious to such shifts.

Highly self-conscious, the architectural radicalism of this era revealed the anxieties caused by the discipline's uncertainty about its identity in a rapidly transforming world. The question of architecture's socio-political

value, in light of its evident complicity with capital, repeatedly came to the fore. No aspect of architecture could be taken for granted. To imagine its future, architecture was forced to re-examine its own disciplinary protocols. While some forms of radical practice celebrated architecture's integration into a larger cultural and environmental milieu, others responded with a retreat to the specificity of the discipline itself.

Academic institutions were a space of confrontation at the time – the site of extended intellectual, political, economic, and physical battles. On the one hand, institutions were understood to have great potential to resist structures of power, while simultaneously perceived as essential mechanisms for the reproduction of existing systems of domination. Some pedagogical experiments aimed to locate the university and its program within larger structures of production in order to redefine its role within society, while others sidestepped conventional institutional frameworks altogether.

The tension between the radical impetus of experiments in architectural pedagogy and the institutional framework of traditional academic platforms manifested in different forms. Some educators challenged pedagogical institutions from within, others tried to institutionalize radicalism, and yet others even abolished institutions altogether. Architectural pedagogy, and more particularly the school of architecture as an institution, served as an object of critique in itself. Mobilized by such critiques of institutional authority, a broad range of counter-institutions and alternative pedagogical platforms set out to undermine hierarchical structures.

In many cases, the battle between radicalism and institutionality was fought from within the very institutions in which pedagogy was housed and led to major upheavals. The most prominent example of this, and a historical tipping point, was the 1968 student revolts. While they greatly exceeded the confines of architecture schools, architecture students were key in some of these protests around the world, from Paris, to Berkeley, to Mexico City. The revision of architectural education was inscribed in a larger set of questions regarding the role of universities in society – including student involvement within the administration of schools and the social accessibility of higher education versus class discrimination.

Central to the outcomes of these revolts, as they developed in Paris for example, was the formation in 1969 of the Unité Pédagogique d'architecture no. 6 (UP6), which famously promoted an alternative to the pedagogy of the Beaux-Arts School, while reformulating architecture's self-understanding from inside its pedagogical tradition. [2] Students and faculty at UP6 openly accused the school's prevailing curricula and teaching methods of being incapable of addressing architecture's relationship to contemporary social and political maladies, and demanded that their vision of a new social order be reflected in the very basis of their studies. In post-1968 Paris, architectural pedagogy was revised at the same time that the university was redefined.

Similar concerns triggered protests in architecture schools worldwide. Sometimes revolt within the university transformed architectural education and sometimes revolt within architecture transformed the university. The 1969 burning (allegedly by students) of

Yale's Art and Architecture building, which had only been completed in 1963, symbolized the unrest within the bastions of disciplinary authority.[3]

When architectural pedagogues tried to reinvent architectural education outside of the academic context, they often claimed 'independence' from the institutions in which they operated. Yet they often exploited, subverted, or simply depended on them as foil for their radical self-definition. The latter was the case of Global Tools, a group of architects that operated in Italy from 1973 to 1975. Defined as "a counter-school of architecture (or non-architecture; or again, non-school)" (Global Tools, 1975), they simultaneously challenged architecture's own constituency and the nature of academic institutions. Set up as a system of laboratories between Milan and Florence, with meetings held in the countryside, the Global Tools group evaded the institutional confines by organizing trips as part of their educational program.[4] In these trips and workshops, Global Tools aimed to promote the development of individual creativity using diverse methods that ranged from survival techniques to communication technologies.[5] Despite developing these experiments outside university frameworks, the members of Global Tools remained attached to different institutions, as many of them simultaneously taught at the School of Architecture at the University of Florence (UniFI).

Meanwhile, the Institute for Architecture and Urban Studies (IAUS), founded in New York in 1967 by Peter Eisenman, had a pedagogical program run by a core group of scholars and architects, which was offered to universities in the United States as a package for

a year of study in New York. While teaching at IAUS, many of the members of this group held positions within prominent academic institutions on the East Coast of the US. The formation of the IAUS was an attempt to create a different kind of institution for architectural education outside the traditional academic setting, yet it mobilized existing university networks in its lectures, courses, exhibitions and publications.[6]

The protagonists of such experiments inevitably became institutional figures in alternative structures that, in some case, were no longer anti-institutional, but hyper-institutional. The latter was the case of the Ulm School of Design (HfG). Moving off the grid – both geographically and ideologically – the school's founders hoped to create a fundamentally different approach to design education, with the ambition to re-democratize Germany after WWII. Founded in 1953, the school had its roots in the German Nazi resistance, declaring 'good design' as one way to create a 'better society'.[7] Inviting mathematicians, sociologists, writers and philosophers as guest lecturers, the strategies privileged by the school within its curriculum increasingly favoured optimization, with design becoming a mode of control over production – while being itself constantly protocolled and supervised. In Ulm, experimentation created a paper trail – regularized meetings and debates questioning pedagogy were transcribed, copied, disseminated and filed. Pedagogical and aesthetic radicalism was institutionalized, or rather, institutionality was radicalized.[8]

In other experiments, the rethinking of structures operated the other way around: rather than building an enclave,

the very architecture of the school sometimes reformulated the central institution of teaching. For example Giancarlo de Carlo's radical proposal for a decentralized university (1962–65), the mobile network of academic structures designed by Cedric Price in his Potteries Thinkbelt (1965),[9] or Candilis, Josic and Woods' open-system building for the Freie Universität (FU) in Berlin (1967–73) tried to manifest an open-ended structure both for building and pedagogical method. The network schemes of these architectures symbolized that knowledge was no longer transmitted but produced, while hoping to actually recondition student-teacher dynamics through their spatial choreography of physical and intellectual 'freedom' of movement.

In a more immediate example, Cedric Price's and Peter Murray's Polyark Bus in 1973 literally put architectural education in motion.[10] Picking up students from one school and dropping them off at another, it probed the foundation of institutional continuity by simply exchanging a part of its population. At the same time in Chile, the faculty of the School of Architecture of Pontificia Universidad Católica of Valparaíso left the academic building behind altogether, undoing its role as pedagogue and pedagogical symbol. A multitude of activities drew students out of the classroom, with exploratory exercises unfolding throughout the city and through trips being incorporated as part of the School's curriculum. The School's sustained challenging of university authorities culminated in the foundation of an alternative educational platform, the 'Open City' in Ritoque. The collective construction and inhabitation of this alternative site for pedagogy pushed the understanding of a 'school' and its relation to work and life.

In all these cases, radical pedagogies questioned architecture's disciplinary assumptions on the one hand and architecture's relationships to social, political and economic processes on the other. It was precisely because architecture's disciplinarity could no longer be taken for granted that radical pedagogies reflected on architecture's autonomy as well as explored its promiscuity with neighbouring fields.

One form of this disciplinary self-reflection interrogated the historical and formal bases of Modernist traditions. The group of architects known as the Texas Rangers at the University of Texas School of Architecture (1951–58)[11] and, later, John Hejduk and Bob Slutzky at The Cooper Union in New York (1964–2000),[12] and Colin Rowe at Cornell (1962–1990)[13] placed an emphasis on addressing the autonomy of architecture through its formal language. Considered to be the very root of architectural creation, the use of such language was trained through exercises such as the famous 'nine-square grid problem.'[14]

Like in Texas Rangers, architectural historian Joseph Rykwert and theorist Dalibor Vesely relied on the assumption that architecture had an internal core that could be uncovered and mastered. Their teaching, however, aimed to redefine this 'essence' on the basis of phenomenology and the hermeneutic tradition.[15] Their master's level course at the University of Essex (1968 to 1978) was a distinctive approach to design education rooted in an architectural interpretation of phenomenological philosophy.

Different schools around the world throughout the '60s and '70s became hubs for a redefinition of 'architecture' and the reconfiguration of its design

protocols by taking cues from fields and movements such as linguistics, sociology, philosophy, psychoanalysis, feminism, environmentalism, and digital technologies. The search for answers to the question 'What is architecture?' was not limited to introspection. Design studios led by Robert Venturi and Denise Scott Brown at Yale, and more broadly the pedagogy promoted under Charles Moore's tenure as Dean of Yale from 1965 to 1970, attempted to reframe 'architecture' without the capital A. Incorporating sociological techniques of observation and documentation into the strategies mobilized in studios, architecture was situated (formally and symbolically) in the language of popular and vernacular culture.

Other experiments left behind disciplinary limits altogether and engaged in the transformation of social, political, economic or technological conventions. The College of Environmental Design at the University of Berkeley, for example, sought to transform the architect into a political agent in the aftermath of the student protests of 1968, deploying an interdisciplinary approach that integrated sociology, policy making and regional planning into the curriculum. As a manifestation of this changing paradigm, the newly funded Center of Independent Living in collaboration with CED faculty Raymond Lifchez introduced accessibility into the concerns of studios and developed strategies inclusive for individuals with disabilities.[16]

Elsewhere, Giancarlo de Carlo (who had anarchist affiliations prior to the '50s) called for a new architectural pedagogy in the early '60s that not only promoted activist interventions but also would itself *be a form of political activism.*

For him, the role of the pedagogue was to transform the student into an intellettuale dell'architettura – *someone who understood the role of the architect as an ethical and socio-political one.*

On a parallel front, and part of many of these experiments, architecture's traditional bond with technology was reprogrammed through visionary science fiction and the advent of computation and robots. Founded in 1964, the Laboratory for Computer Graphics and Spatial Analysis (LCGSA) at the Harvard Graduate School of Design, comprised architects, geographers, cartographers, mathematicians, computer scientists and artists. By introducing the computer into academic settings, they aimed to profoundly alter the ways in which design disciplines operated.[17] Experimental workshops and seminars aimed to displace the use of the computer from the periphery of the architectural profession (essentially its use in structural engineering, mechanical engineering, contracting and cartography) to the centre of the design process.

A few years later, Nicholas Negroponte's Architecture Machine Group (ArcMac) spearheaded a desire to forge alliances with the expanding world of computation. Carrying out experiments with cybernetics and artificial intelligence at MIT's School of Architecture and Planning in the late '60s, the group promoted a synthetic relationship between man and machine. [18] The development of the MIT Media Lab out of these experiments shows how new strategies within architectural schools could reorganize the wider institution and open up new cross-disciplinary spaces. Experimental enclaves, such as LCGSA and ArcMac, served as the incubators of the future paradigm of computational

architecture that drastically redefined the labour of the architect.

Positioning architecture as universal technological apparatus, Buckminster Fuller conducted geodesic construction workshops as response to newly global topics such as resource management, waste and climate. Based at the Southern Illinois University at Carbondale during the '60s, Fuller globalized his teaching by visiting countless schools around the world. [19] Other experiments 'exported' architectural expertise in the form of a teaching manual. Charles and Ray Eames, for example, were brought in to develop a new pedagogical program for design education in Ahmedabad in the late '50s. In their 1958 report to the Government of India, the Eameses recommended the implementation of a communications-based design-training program to assist with the country's industrial development. Architectural education was to become not just the site of experiments, but the tool for national economic improvement.

Such exportation of pedagogical expertise had its counterpart where architectural teaching methods were 'imported'. The Architectural Association (AA) in London became a 'jet-age school', with an international body of students and faculty. The institutionalization of a global diversity of studio-visitors and guest lectures offered a dense pedagogical 'menu' of subjects and techniques to order from.[22] The experiments of the post-war period were vastly diverse, but diversity itself increasingly became one of the key experiments, notably in Alvin Boyarsky's model of the 'well-laid table,' which offered multiple approaches to architectural education within the same school.[23] The dialogue

between experiments became the new experiment –never insular, but deeply interconnected, overlapping and moving in an ever-shrinking world.

The inevitable tension between the radicality of these experiments and the systematizing impulse of pedagogy resulted in a form of erosion. With typically short lifespans, the experiments often found one of the following ends: abandonment or dissolution; assimilation into a generic mainstream education; or termination due to financial and/or political constraints. And yet, much of the discipline's strength originated in these short-term projects. They affected the institutions that swallowed them up and they still lie within the discipline, waiting to be reawakened by another generation like a dormant virus or a monster in a horror film.

A retrospective consideration of these experiments could treat such research as a form of epidemiology: a way of understanding the modes of discourse-building by looking at schools as central hubs for complex patterns of contagion. But it is also a warning: Architectural pedagogy has become stale. Schools spin old wheels as if something is happening, but little is going on. Curricula structures have hardly changed in recent decades, despite the major transformations that have taken place with the growth of globalization, new technologies and information culture. As schools appear to increasingly favour professionalization, they seem to drown in self-imposed bureaucratic oversight, suffocating any possibility for the emergence of experimental practices and failures. There are a few attempts to wake things up here and there, but it's all so timid in the end. There is no real innovation. In response to the timidity of schools today, the

Radical Pedagogies project returns to the educational experiments of the '60s and '70s to remind us what can happen when pedagogy takes on risks. It is a provocation and a call to arms. **m**

NOTES

(1) The installation at the Venice Biennale was curated by the authors of this text, Britt Eversole and Federica Vannucchi. The exhibition in Warsaw was curated by Beatriz Colomina and Evangelos Kotsioris. For further information on the more than 90 case studies, including the full list of over 78 worldwide contributors, see www.radical-pedagogies.com

(2) See Violeau, 2005.

(3) The brutalist building of the school was designed by Paul Rudolph and completed between 1959 and 1963. Rudolph served as the School's Dean between 1958 and 1964. The burning of the building coincided with University wide sit-ins, occupations, explosions and demonstrations. The Black Panther trials were in progress and there were riots in the city and rallies at Yale. Two bombs went off at the university hockey rink. A "Free the Panthers" banner appeared on the burned building of the school of architecture. See Colomina, 2011.

(4) See also Borgonuovo & Franceschini, 2015.

(5) See Global Tools, 1974.

(6) For an overview of the IAUS, its practice, publications and educational mission see Casabella, 1971; Eisenman, 1971; Ockman, 1988; Förster, 2008, 2015; Allais, 2010.

(7) This aspiration is stated in a leaflet from 1949 describing the plans for the new school. See Von Seckendorff, 1989.

(8) See Meister, 2013.

(9) See Price, 1966; Hardingham & Rattenbury, 2007.

(10) See Murray, 1986.

(11) See Rowe & Hejduk, 1957; Caragonne, 1995.

(12) See Slutzky, 1980; Crosbie, 1984; Cooper Union for the Advancement of Science and Art, School of Art and Architecture, 1971.

(13) See Rowe, 1999a, 1999b; Aureli, 2011.

(14) See Hejduk, 1985; Franzen & Pérez Gómez, 1999.

(15) See Rykwert, 1968; McKean, 1972.

(16) See Lifchez, 1979.

(17) See Warntz, Schmidt, & Steintz, 1969; Christen, 2006.

(18) See Negroponte, 1970, 1975.

(19) See Fuller, 1962, 1963; Fuller & McHale, 1963; McHale, 1961.

(20) See Acciavati, 2016.

(21) See Colomina, 2010.

(22) See Gowan, 1972, 1975.

(23) See Sunwoo, 2009, 2012.

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