

8. The Social Role of Education and Research

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8.1 His mentors

A child of the 1963 student demonstrations, which asserted an identity claim on the need to integrate design research with the education of the architect, Alberto Seassaro, immediately after graduating, set about *putting down roots* at Politecnico di Milano, advancing research proposals aimed at renewing the contents of design pedagogy and, from the outset, undertaking teaching-assistant activities that saw him engaged not only in Milan but also at Politecnico di Torino and the University of Pescara.

Indeed, Alberto Seassaro's professional activity, outlined in the previous chapters, which led him to realize works in industrialized building, interior architecture, design, and art, though intense and at times frenetic, never diverted him from the university world.

It is 1964: Alberto Seassaro and Ugo La Pietra, freshly graduated, submit a proposal for a research project titled *La ricerca morfologica. Proposta per una sistematizzazione della bibliografia sui problemi della forma. Contributo alla organizzazione della biblioteca dell'Istituto di*

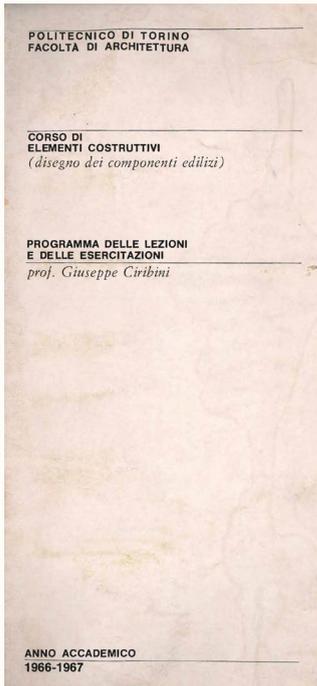
Composizione e all'approntamento degli strumenti didattici per i corsi [Morphological Research. Proposal for a Systematization of the Bibliography on Problems of Form. Contribution to Organizing the Library of the *Istituto di Composizione* and to Preparing Teaching Tools for the Courses]. The research, an immediate outgrowth of their thesis, would receive two subsequent ministerial grants aimed at defining criteria and principles for establishing a section of the library of the nascent *Istituto di Composizione* [Institute of Composition] in the Faculty of Architecture at Politecnico di Milano, dedicated to issues of form for the use of Architecture students.

The specific sectors of the disciplines on aesthetics, semiotics, the psychology and physiology of perception, etc., have always been covered 'by proxy' by the architect, without the constructive bases necessary for this operation, with a mechanism entirely analogous to that of the sociological and economic sciences with respect to urban planning. Therefore, this bibliography arises from the need to confront decisively the cultural debate on the problems of modern architecture through an adequate knowledge of problems of form and the definition of the critical and operational level at which the architect himself can intervene. (La Pietra, U. & Seassaro, A., *La ricerca morfologica. Proposta per una sistematizzazione della bibliografia sui problemi della forma. Parte prima - L'approccio deduttivo*, 1964)

These were the years that saw, at Politecnico di Milano, the establishment of the first research institutes aimed at teaching (the future Departments) and, with them, the first experiments on methods and modalities for transferring research contents into the educational sphere. In the years that followed, relations between research and teaching would become a distinctive trait in Alberto Seassaro's academic trajectory. Likewise, the very subject of the research project – the design of infrastructures for knowledge and knowing, such as a departmental library – already represents a first, clear sign of his engagement with, and attention to, the university institution and its organizational forms.

These are the beginnings. But the premises of what would come later are already discernible. On the one hand, the theoretical and ex-

1. Programma del Corso
di Elementi Costruttivi,
prof. Giuseppe Ciribini,
Facoltà di Architettura,
Politecnico di Torino, A.A
1966-67.
[Document →](#)



perimental approach to problems of form stemming from his training in the visual arts; on the other, attention to forms of innovation and industrialization of technologies, manufactured elements, and building processes. Each of these themes, though still in an embryonic state, lays the groundwork for the accomplished developments that would characterize the years of academic maturity.

In addition to his research activities, Alberto Seassaro was immediately involved by Ludovico Belgiojoso, Vittoriano Viganò, and Cesare Blasi in teaching within the disciplinary area of *Composizione architettonica* [Architectural Composition]. Taking his first steps first as *Assistente Volontario* [Volunteer Assistant] and then as *Assistente Incaricato* [Contract Assistant], he became passionate about the themes of form and its modeling process, the design of systems and components, and didactic experimentation, topics on which he began organizing seminars and exercises, in a continual transfer of experience from artistic and professional work to the academic sphere.

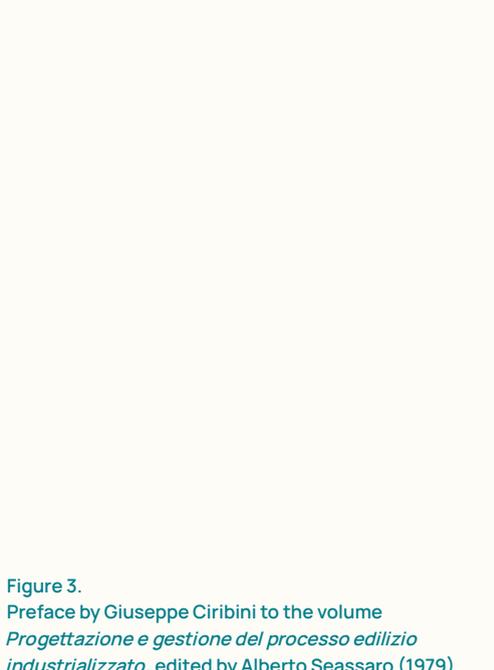
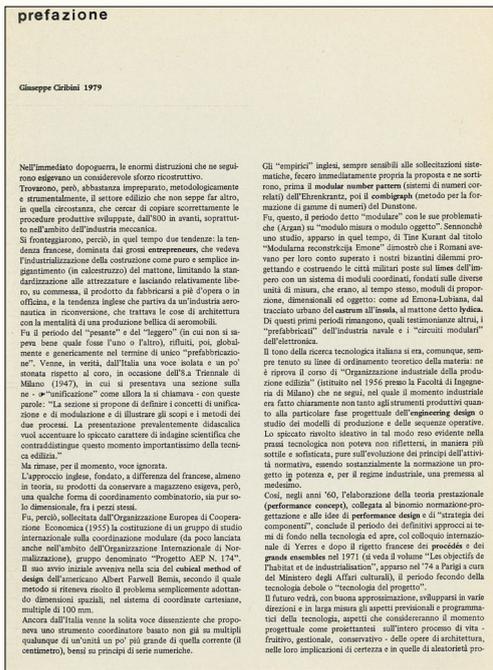
Along this path, the figure of Giuseppe Ciribini, whose courses in *Elementi costruttivi. Disegno dei componenti edilizi* [Building Elements. Design of Building Components] and *Metodologia della progettazione* [Design Methodology] he assisted in Milan and Turin (Ciribini, 1966–67 [13](#)) is the one he came closest to in terms of thematic interests and design approach. Thanks to this closeness, he shifted his focus from compositional cultures to technological cultures. It is also to Ciribini – a profound innovator in the disciplinary field of *Tecnologia dell'Architettura* [Architectural Technology], who led him to open up new research perspectives, especially on building industrialization and on the impact that scientific and technological innovations were having on the construction sector – that he owes his approach to *systemic* thinking (on Giuseppe Ciribini's role in the cultural growth of the Technological Area, see Cristina Tonelli's chapter in this volume).



Figure 1.
Cover of the volume *Tecnologia e progetto*, by Giuseppe Ciribini (1984).



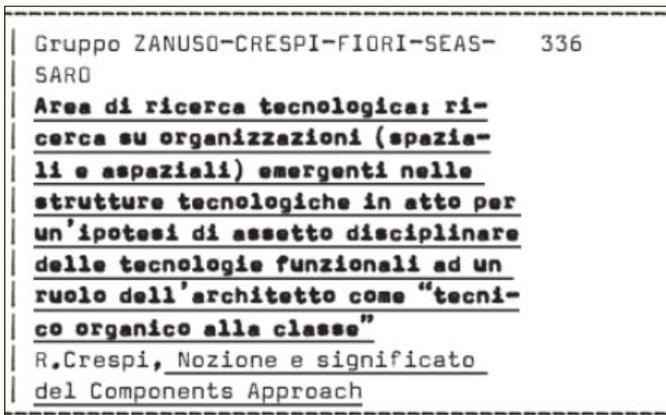
Figure 2.
Cover of the volume *Introduzione alla tecnologia del design*, by Giuseppe Ciribini (1979).



8.2 The Imprint of Didactic Experimentation at the Faculty of Architecture between the 1960s and 1970s

At the end of the 1960s and throughout the 1970s, the Faculty of Architecture experienced years marked by transformation, born of a particular experimental tension. The student occupations of 1963 and 1967 had the strength to trigger a profound revision of the statute of project-based pedagogy. In an initial phase, the reorganization of the educational structures proceeded by questioning the training framework based on traditional mono-disciplinary courses, moving instead toward groupings of disciplines and courses articulated into macro-themes; frameworks within which students were called to experiment with the different scales of design, from urban planning to interiors. Alberto Seassaro, in the role of Volunteer Teaching Assistant, appears with his teaching programs in thematic groupings that, over the years, would bring together different instructors. At the outset the group consisted of Marco Zanuso, Raffaella Crespi, Leonardo Fiori, and Alberto Seassaro.

Figure 4.
1969-70, with 336 enrolled students, the Zanuso, Crespi, Fiori, Seassaro grouping was among the most followed by students among those not belonging to the area of architectural composition. (AA.VV., *La rivoluzione culturale*, p. 51).



He then became a permanent member of the research-teaching group *Laboratorio di produzione del territorio* [Laboratory for the Production of the Territory], formed around the themes of housing and inhabiting and established with Giacomo Scarpini, Bianca Bottero, and Giorgio Gaetani. It is here that he began to focus on the construction sector and its trans-

formations. In this teaching context, the technological fulcrum sheds its more conventional connotations and is put at the service of the problems of dwelling. On the research front, the housing theme is addressed by: taking a wide-angle view of the economic and social issues that affect the formation of

SOMMARIO

① 1984 di Powell e Lucrezio Levi
 ② La casa rivelata da Ida Fari
 ③ anche l'altro e il 1/2
 ④ città attraente
 • che? Ida Fari ne cristiana
 oggi il non
 ⑤ diventa e offe elements. E dove
 ⑥ Le parole della donna giovane
 ⑦ Viaggio in quartieri di Milano
 e Alberto Tomba illustrato
 da Renato Carpentieri
 ⑧ Tutti i nomi mi trascinano
 ⑨ L'utopia di Chumy Chumetz
 Tecnologica e Attente Scenari
 ⑩ Poove. Anna Alderman
 ⑪ Postfazione
 ⑫ Il monte veneto. Nina Lendi
 ⑬ L'utopia di una piazza e una
 città di Cuneo e una
 valletta di

**LA CASA
 AVEVE UN'ALTRA**

Le testimonianze sono state raccolte da alcune famiglie che il problema dell'abitazione lo hanno vissuto in modo eccezionale, al di là delle loro scelte e dei loro desideri. Non hanno scelto la casa alternativa. Non hanno scelto lo stabilimento delle metropoli. Né il tranquillo rifugio di campagna, della comune in Toscana. Abitavano in case più belle del mondo, la villetta con l'orto. Una famiglia tranquilla. Solo che erano in Brianza, a Seveso accanto all'Icmesa. E dunque a loro è toccata una mattina di trovarsi, in un mondo avverso, con un'abitazione che non era più la loro. Hanno accettato il dialogo con la morte con una tranquillità perfetta. Hanno contato insieme ai soldi che gli toccavano per il risarcimento i nomi di quelli che si ammalavano e morivano. "Il marito della Rina, la mamma della Wanda..." Hanno allontanato disincantandola, la paura. Anche noi abbiamo fatto la stessa cosa. Leggere queste cose che effetto ci fa? Non è una preoccupazione moralista. La festa in giardino il giorno dopo lo scoppio della nube, dove ognuno senza saperlo si cibava della sua morte o della sua salvezza. Il residence di Assago dove tutti si trovavano, dove nessuno trovava le chiavi, gli ascensori, dove i mariti dicevano alle mogli "Ma sei sempre in giro", tutti i parametri sono saltati. L'accettazione della legge ha prodotto la rottura della legge. L'attaccamento alla norma lo sballo di tutte le norme. La vita tranquilla, la morte. L'inconsapevolezza, la consapevolezza del rischio più drammatico. "Mamma Buttell vi ha questi zucchinetti, sono troppo amari" "Ma tu hai preso le zucchine nell'orto. Le parole di quella cena le ho ancora in mente. Erano passati quattro giorni da quel sabato che non ci aveva detto ancora niente. Ma la buona "artrite" tutta nel mangiare la verdura. Lo scoppio lo ricordo bene. Avevo avuto paura; mi son detta, adesso l'Icmesa parte al completo, o che prende fuoco. E non era la prima volta. Il fumo si era subito alzato sopra le nostre case, con un rischio. Allora avevo chiuso il balcone. Arrivato mio marito, e mi fa "cosa c'è, c'è odore di metano, forse c'è il gas aperto". Sì, ma è stata l'Icmesa che ha buttato fuori non so cosa". Le sera abbiamo festeggiato il compleanno di mia nipote che abita il proprio vicino a me, anche lei a due passi dalla fabbrica. Eravamo in cortile e gli invitati mangiavano frutta e non frutta, tutto raccolto dalle orti. Il giorno dopo tutti questi ragazzi della festa stavano male: vomito, diarrea. Pensavamo che i dolci fossero guasti. Ma nessuno di noi ha detto niente fino al venerdì dopo, sette giorni dopo quando c'è stata l'assemblea degli operai ed è venuto l'ufficio sanitario. Eppure noi che stavamo proprio lì, era tanto che stavamo male. Di puzza ce n'era sempre, e anche di scoppi. Come quello del 13 gennaio del '75, il giorno di Sant'Antonio. Il medico il medico sapeva dirlo di veleno ma ho resistito sempre. Nemmeno il medico sapeva dirlo.

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**CHUMY CHUMETZ
 UNA BIOGRAFIA
 UTOPIA
 TECNOLOGICA**



MILANO LIBRI EDIZIONI

**● LE ARCHITETTURE DELLA LIBERAZIONE
 ● GLI IPERMERCATI DELLA RICERCA DI SE
 ● IL MERCATO DEL DISAGIO E
 ● I VENDITORI DI BENE ESSERE**

Oggi vorrei cominciare ad introdurre il discorso sulle architetture della liberazione, non solo come luoghi fisici ma anche come luoghi del pensiero: luoghi, supporti, protesi.

Prima di occuparmi degli ipermercati della ricerca di sé, come San Jose in California e Poona in India, dove la tecnologia della liberazione è più avanzata, dove i laboratori d'incontro si chiamano "terre" (più gioia) come a Eindhoven, vorrei risalire alle matrici prime che hanno segnato la traccia poi seguita da molti dei delusi della rivoluzione mancata, prima che si avviasero sulle strade dei terapeuti.

Una serie di punti che sono i punti di un interesse di fili che van no dall'antipsichiatra, cioè dalla dialettica di liberazione al mercato delle sue tecniche. Mercato disomogeneo oscillante fra defferenti strutture di discorso.

Gli antipsichiatristi di ieri oggi si chiamano terapeuti popolari, psi oterapeuti per il territorio, smartizzati scaldi impegnati a portare soccorso alle sofferenze e a schierarsi al fianco di chi "contro la nevrosi combatte davvero". Psiconalisti da combattimento che per mantenersi in vita ha bisogno di essere sempre "più contro". Il fanasma della reciprocità diventa proto-nostalgia nel rapporto analitico, mantenuto entro le strette seduttive dell'haic et nunc. Il rapporto inter pares approda alla terapia reciproca.

Psicoterapeuti confessori, ma nella confessione (scrive Freud in "Il problema dell'analisi del non medico") "il peccatore dice quello che sa", non è chiamato a dire di più.

La relazione analitica non si basa più solo sulla parola, entra in gioco lo sguardo, il contatto, lo scambio emotivo e sentimentale, la dimensione della intrapsicizzazione, che Lacan ha definito ironicamente della "intra-subordinazione". In nome della cura il dire si trasforma in atto, il rapporto si fa apparentemente lineare, faccia e faccia, diretto dialogico. La parola regredisce al lamento.

Le ambiguità, le perate, le astuzie, i giochi di prestigio e di rivoltella innescono la relazione analitica: il padrone modernizzato accetta di dialogare, il sapere coincide col potere a coesistenza, diventa saper fare, saper curare: l'ars sanandi campeggia sulla scena.

Ma con le tecniche di importazione americana e d'Oriente i curatori d'anima diventano massaggiatori d'anime. L'esaltazione dello sbalzo della destrutturazione psichica, i flussi desideranti antedipendenti e percorsi ricognitivi ("dobbiamo perdere la testa per entrare nel corpo" ammoniva già dappinna Cooper in "Grammatica del vivere") prepaiano alla regressione dell'intelligibile al sensibile, al protagonismo del corpo.

L'esaltazione del non sapere, il trionfo dei valori del corpo svulsi dalle fatiche della riflessione aprono la strada ai massaggiatori reichiani, maratonetici, ai guru nostrani o di importazione, ai manipolatori del corpo, liberato o in via di esserci.

Figure 5. From the collection of teaching materials and student reflections from the strand *Abitazioni, classi sociali e territorio - filone 3* [Housing, Social Classes, and Territory - strand 3].

Figure 6. Clippings, reworkings, photographic enlargements and reductions ready for new collages (Alberto Seassaro Archive).



housing demand and the logics of supply; tracing, through a political rather than disciplinary lens, the relationship between economic status and the quality of demand; highlighting the political imprint of housing reforms and the dynamics of land rent and the real-estate market; bringing to the fore the emerging politico-economic problems in the productive organization of the building process in the face of industrialization; investigating the role of technicians; the fragmentation and deskilling of the sector, up to and including a *political* reading of the *Italian road to industrialization*, developed from a critical analysis of the catalogue of prefabricated manufactured elements by Montecatini-Edison. Central throughout are the micro-dynamics of dwelling, observed with an anthropological, ethnographic, almost psychoanalytic gaze. The political tenor led him, in those same years, together with Ida Farè, Corrado

Levi, and Adriano Di Leo, to activate experimental teaching activities (seminars, projects, listening and consciousness-raising groups) under the title *Il privato è politico* [The personal is political].

I recall in particular the seminar he led with Corrado Levi, titled *Il privato è politico* [The personal is political], in which students' unrest and their rejection of architecture were addressed through a method that paired the design process with a simultaneous recognition of personal experiences and sensibilities. The seminar was followed with great enthusiasm by many students who, through this experience, discovered a novel way to approach architecture and to grasp its allure. (Bottero, 2024)

Decisively political, too, was the way project themes were handled in teaching, having students grapple with the city's concrete problems, with the active involvement of society (the Tenants' Union, neighborhood collectives and committees, housing-occupation and housing-struggle committees, factory workers' coordination groups, grassroots trade-union groups, the Student Movement, self-man-

aged social groups, grassroots actors articulating demands actively at the political and social level, etc.) in order to gather and rework needs and urgencies, forging a link between workers' struggles and student struggles.

Political and experimental, finally, is this operating *in the thick* of society, moving away from the path of academic exercises *in vitro*, bringing multidisciplinary contributions into teaching so as to refine the inquiry into the problems of inhabiting with a gaze that links the private and the political within the dimension of dwelling 23. The teaching activities were preceded and followed by a substantial production of written documents. As was typical of the Faculty of Architecture in those years, these teaching support and companion documents took the form of the *dispensa* [course booklet] – a tool used to disseminate *grey materials* useful for instruction. They are accounts of the activities carried out with students, bulletins, chronologies that gather previous experiences, comment on them, identify critical elements and deviations from objectives, and are offered to students in subsequent years as material for reflection, as a starting point for activities.

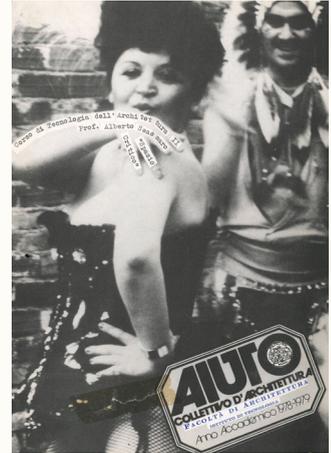
The programs in the *Guida dello studente* [Student Guide] are serious business as well. They arise from cultural proposals by the working group, debated and approved at discussion tables. We have chosen to reproduce below the introductory section of the program of the research-teaching group *Abitazioni, classi sociali e territorio – filone 3* [Housing, Social Classes, and Territory – strand 3], of which Alberto Seassaro was a member, pertaining to the courses of the 1977/78 academic year 34.

A true essay – at times irreverent – able to convey the cultural climate, the freedom of thought, the linkage between teaching and social problems, the political sensitivity present in course syllabi, and the importance of language and terminological references to a cultural system in transformation.

In drafting the syllabus, the group's first act is to strike out the official course title, annotating, in the text that follows, the reasons why each term composing that title is outdated and



2. Aiuto, Corso di Tecnologia dell'Architettura II, prof. Alberto Seassaro, Facoltà di Architettura, A.A. 1978-79.
[Document →](#)

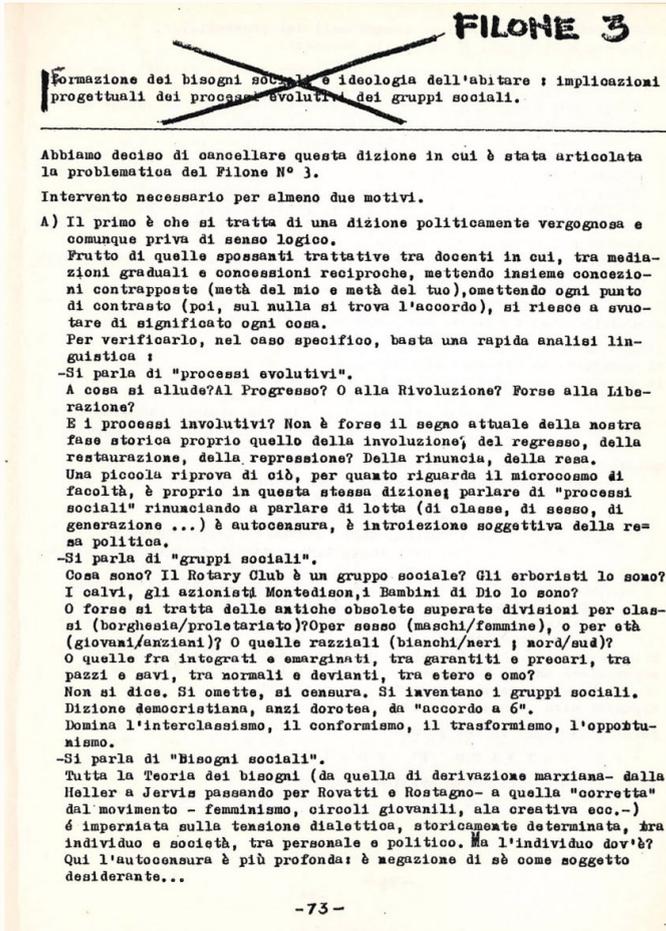


3. Programmi 1977-78 Ambito n. 1, Abitazioni, classi sociali e territorio.
[Document →](#)

Figure 7.
 Cover of the teaching booklet produced using the collage technique by Alberto Seassaro.



Figure 8. Excerpts from the 1977-78 syllabi, Area n. 1, *Abitazioni, classi sociali e territorio* [Housing, Social Classes, and Territory], p. 73.



politically unacceptable. The table of contents shaping the presentation shows, already from the headings, a clear vocation of the teaching programs for experimenting with alterna-

tive ways of thinking about pedagogy (research conducted jointly by students and instructors; terms such as *consciousness-raising sessions*; evening seminar programs outside standard teaching hours, etc.), but above all it proposes innovative contents for design activities. Taken together, they amount to a true counter-culture manifesto. In 1980, with his appointment at Politecnico di Milano –first as Associate Professor and then, in 1990, as Full Professor of *Architectural Technology*, he became the holder of the chairs *Unificazione edilizia e prefabbricazione* [Building Standardization and Prefabrication]; *Tecnica ed economia della produzione edilizia* [Techniques and

Economics of Building Production]; *Architectural Technology; Organizzazione della produzione* [Production Organization]. He brought into teaching not only theoretical research but, above all, the experiments in building industrialization and prefabrication conducted at Montecatini's Project Center.

In his research-teaching proposals, whether for seminars or design exercises, a few keywords stand out for their anticipatory force regarding themes that would become central when he was later tasked with designing the educational framework of the Bachelor's

«si parla di "implosioni progettuali dei processi..."»
Questo è il titolo di un Giulio Garzanti.

B) Il secondo motivo è che, nella "lottizzazione dei filoni" (uno ai "progettuali" e uno a me, uno agli "scientifici" e uno a te), il filone N°3 è ospitato - non richiesto, non cercato - al gruppo di docenti dell'ex abito "il privato è politico". Ciò a noi.
Dovrà essere il filone dei "biologisti"?

Però anche andarci bene, una etichetta vale l'altra se non la si rubisce. Tanto più che noi siamo anche, alla stessa stregua, scientifici, progettuali, tecnologici, economisti, sociologi.

Ma poiché dobbiamo organizzarlo noi, gestirlo noi, condurlo noi ci metteremo dentro i nostri contenuti, le nostre problematiche, la nostra metodologia e la nostra scienza.

Non ci sentiamo pertanto vincolati alla vecchia formulazione, compreso misoria e sociale.

A cancellazione eseguita, com'è adesso il Filone?

L'oggetto del lavoro: la casa, la città. OK.

La tematica: il bisogno. OK. OK.

La problematica: la dialettica tra bisogni dell'individuo e bisogni del capitale passando attraverso quella tra bisogni individuali e bisogni sociali e quella tra i bisogni contrapposti degli antagonisti sociali. OK?

Questo per noi significa ricominciare:

- la riduzione dei bisogni a domanda di merci,
- " della lotta alla domanda
- " del desiderio al bisogno
- " (evigilante) della sensibilità alla economia
- " del bisogno soggettivi a quelli economico-politici
- " dei bisogni qualitativi a quelli quantitativi

la contraddizione tra la spinta alla liberazione dei bisogni (cioè il bisogno come autorità, costrittiva) e la spinta alla liberazione del desiderio (cioè il bisogno come contraddizione che sviluppa l'uomo).

Riconoscere le incrostazioni, i sedimenti depositati nelle nostre coscienze dal potere borghese, maschile, adulto e dalle sue ideologie che ci impediscono di sapere ciò che vogliamo.

Riguardo alla casa come a tutto il resto.

Però, per noi, in una parola

" IL PRIVATO E' POLITICO "

in forma necessariamente critica e dubitativa

" MA COSA E' IL P.? "

Il ciclo didattico del Filone 3 viene organizzato come attività di ricerca collettiva tra docenti e studenti, tenuto nella forma di Seminario Permanente, ogni mercoledì pomeriggio alle ore 15.

Il lavoro è tenuto dai docenti:

Anna Alderuccio (collaboratore aereo.), Maria Antonietta Aragona (collaboratore aereo.), Edoardo Baraldi (collaboratore aereo.), Nives Ciardi (collaboratore aereo.), Ida Parè (prop. inc. di Igene Edilizia), Corrado Levi (inc. etab. di Composizione Arch. V), Gaia Macchia (prop. inc. di Igene Edilizia), Argia Marani (collaboratore aereo.), Meri Pignataro (prop. collaboratore aereo.), Alberto Sansano (inc. etab. di Tecnologia dell'Arch. II).

Nel seminario si prosegue la ricerca iniziata negli anni passati sulla analisi critica dei ruoli privati e politici del rapporto casa/famiglia ("LA CASA/ I RUOLI FAMILIARI/ IL CORPO").

La nostra tematica di lavoro

Il nostro programma è quello di sviluppare la conoscenza, scientifica e politica ad un contempo, dei fenomeni territoriali attraverso l'assunzione della contraddizione tra le classi sociali; in dialettica a quella strutturale, tra le classi economiche.

A partire dalla sua emergenza tematica più evidente ed elementare, ma anche più complessa e asocata.

Il rapporto tra CASA E FAMIGLIA, esplorato attraverso l'analisi dei RUOLI, quali emergono dai vissuti dell'esperienza personale e privata dei suoi membri, nelle loro connotazioni di classe, sessuale, uomo donna, e sociale. L'esperienza dell'abitare, a partire dall'esperienza del CORPO che esprime l'immediata realizzazione nelle collocazioni sessuali.

E le mediazioni istituzionali, culturali, ideologiche e simboliche profonde che cambiano nell'uso del CORPO e nell'uso della CASA attraverso il CORPO.

L'ideologia della casa come "luogo del privato" e della famiglia - come "istituzione del privato", e le norme, sancite dai ruoli, che si sono costituite in essa.

Per documentarsi sul lavoro dell'anno accademico passato vedere la dispensa dell' "AMBITO PROBLEMATICO IL PRIVATO E' POLITICO" ("MA COSA E' IL P.?")

Il programma del seminario

Ogni incontro del Seminario Permanente sarà basato su un problema specifico definito all'interno di una tematica generale.

Il problema "di giornata" sarà introdotto a cura dei docenti (e dei gruppi di studenti che lavorano con loro) responsabili di quella tematica.

All'attuale fase di elaborazione le tematiche individuate sono:

- 1) "RUOLI DI CASA" (responsabili Aragona, Baraldi, Pignataro, Marani, Sansano)
- 2) "LA CASA ALTERNATIVA" (responsabili Alderuccio, Macchia, Marani, Sansano)
 - Critica (privata) alla politica della casa
 - critica (politica) all'ideologia dell'abitare
 - Comportamenti, individuali e collettivi, di rifiuto, di rottura della norma e di riappropriazione delle deleghe istituzionali.
 - La scelta comunitaria: esperienze storiche e realtà attuali.
- 3) "MAL DI CASA" (responsabili Ciardi, Parè)

La fase di avvio del Seminario Permanente riguarderà la rilettura critica e collettiva dell'esperienza dell'anno passato, con esposizione della metodologia seguita, e la messa a punto delle modalità di partecipazione degli studenti.

Il Seminario è affiancato da Gruppi operativi (di studio, di divertimento, di lettura, di autoeducazione...) che preparano e sviluppano i medesimi temi del seminario, o temi ad esso complementari.

L'attività dei Gruppi operativi sarà messa a punto dopo la fase di avvio del Seminario. Alcuni gruppi sono già definiti, altri si definiranno sugli interessi che emergeranno nel seminario. I gruppi possono durare tutto l'anno o estinguersi quando hanno esaurito la loro funzione.

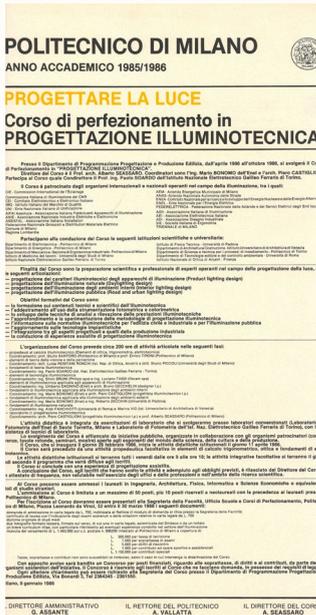
UNITÀ DIDATTICHE DEL FILONE 3

- U22 - La casa alternativa (GRASSANO/MACCHIA/Marani/Mazzocco)
- U23 - Il suicidio e l'architettura (LEVI)
- U24 - Fuori di casa (Aragona/Baraldi/Pignataro)
- U25 - Mal di Casa (PARE'/Ciardi)

questo è il titolo di Giulio Garzanti

Figure 9. Excerpts from the 1977-78 syllabi, Area n. 1, *Abitazioni, classi sociali e territorio* [Housing, Social Classes, and Territory], pp. 74-77.

4. Progettare la luce. Corso di perfezionamento in progettazione illuminotecnica, Politecnico di Milano. Document →



Degree in *Industrial Design*: meta-design as an interdisciplinary methodology; the design of systems and components; *merceologia* [commodity studies]; attention to the processual dimension of the project and not only to the final product. Within the courses he taught at the Faculty of Architecture, he brought his youthful explorations in the art world, introducing the theme of light and project experiments on light-based artifacts, of which the kaleidoscope was, for those of us who were students in those years, the emblematic object we all still remember (Tinelli, 2024). His vocation for teaching reform and his interest in designing innovative, experimentally oriented activities also engaged him on the front of *Istruzione Permanente* [Continuing Education]. From 1984 to 1993 he served as Director of the Continuing Education Program of the Faculty of Architecture.

His was the first *Corso di perfezionamento in Progettazione illuminotecnica* [Advanced Course in Lighting Design] (1985), a course that cultivated one of his areas of teaching interest and of scientific and design research, and that would later become the *Master in Progettazione e tecnologie della luce* [Master's in Lighting Design and Technologies], which he directed until 2010 [4](#).

From 1987 to 1989 he was Co-director of the *Corso di perfezionamento in Metodi e tecniche della progettazione e del controllo ambientale. Ambiente e tecnologia* [Advanced Course in Methods and Techniques of Environmental Design and Control. Environment and Technology] (Director: Maria Bottero) and, in those same years, he was Coordinator of the *Corso di perfezionamento in Progettazione energetica dell'ambiente costruito. Energia e architettura* [Advanced Course in Energy Design of the Built Environment. Energy and Architecture] (Director: Gianni Scudo).

8.3 Technological Culture and Research

We are straddling the late 1970s and the early 1980s. While actively engaged in teaching studios on housing, the home, and the territory,

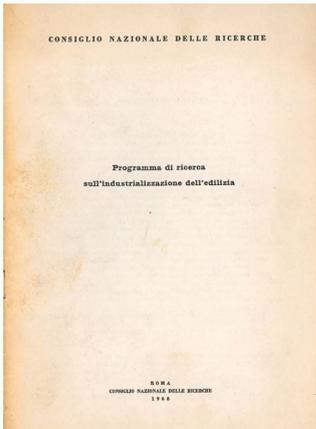
Alberto Seassaro simultaneously set in motion an intensive research activity that feeds, completes, and deepens these themes, and then uses the teaching moment as a testing ground. The teaching-research dyad is another distinctive trait that aptly describes his way of inhabiting the university, and one we will see characterize his years as Dean of the Faculty of Design, when this very dyad would become paradigmatic of his institutional mandate.

The roots of this approach, which also contains a precise political vision of the university and its role in society, can already be found, in embryonic form, in these years of continuous transfer between research contents and those of teaching. On the research front in particular, Alberto Seassaro initiated innovative thematic lines, transferring the experience gained in the 1960s in prefabrication, standardization, and building industrialization, carried out with Giuseppe Ciribini and Marcello Grisotti. These experiences and contents were developed in the realm of design activity for the construction industry, undertaken on behalf of ANCE *Associazione Nazionale Costruttori Edili*, CRESME *Centro di ricerche economiche, sociologiche e di mercato per le costruzioni*, ASSOMARMO, ANDIL *Associazione Nazionale degli Industriali dei Laterizi*, ASSOARREDO, etc.; for SPRED S.p.A. (*Società per la razionalizzazione dell'Edilizia*, established with Montedison and Finsider S.p.A., Milan); and above all for Montecatini Edison.

It was precisely thanks to these concrete project activities that Alberto Seassaro was able to bring into the university sphere the many relationships he had cultivated in his professional practice, also showing a marked ability to build synergies and weave important networks of relations.

When, in the early 1970s, he was commissioned for the CNR research program *Programma di Ricerca per la Industrializzazione Edilizia (PRIE)* [Research Program for Building Industrialization] (Director: Romani) and became coordinator of the *Gruppo Progettazione funzionale del componente* [Functional Design of the Component Group] with Raffaella Crespi and Guido Nardi, Alberto Seassaro found the opportunity to launch important relationships between the CNR research group and university research institutes which, within a few years, would lead him to establish the *Gruppo Nazionale CNR - Produzione Edilizia* [CNR National Group - Building Production].

5. Consiglio Nazionale
delle Ricerche,
Programma di Ricerca
sull'industrializzazione
dell'edilizia.
[Document](#)→



6. Documenti di lavoro
sullo stato della
Ricerca C.N.R. nel
settore Architettura e
Urbanistica.
[Document](#)→



If, in establishing the CNR National Research Group, he glimpsed the opportunity to structure the system of scientific knowledge and research in the building sector, he nevertheless did not withhold his critical view of the potential misuse of the knowledge produced by this research system, due to the CNR's dependence on industry and to the power clashes between the CNR and the university [52](#) [62](#).

We nevertheless find in this experience, undertaken when Alberto Seassaro still held no formal role within the university, an approach to research open to exchange. All his writings from these years are *Proceedings* and *Reports* of seminars and conferences, often promoted and curated by him, involving the entire national academic community and many protagonists from the worlds of institutions, the professions, design, and entrepreneurship. In this participatory form we recognize the hallmark that would characterize the most mature phase of Alberto Seassaro's work: engaging others in debate; constituting national research groups; bringing different experiences to bear on the same topic in order to appreciate its facets and render the thematic framework more complete; fostering the emergence of diverse points of view.

The curatorship of conferences and seminars is the editorial form that, more than any other, proves effective in ensuring a plural vision. On this matter we can cite volumes such as *La produzione del territorio. Settore delle costruzioni e programmazione edilizia* [The Production of the Territory. The Construction Sector and Building Programming] and *Normative e metodologie di progettazione* [Regulations and Design Methodologies]. Both are proceedings collected from the *Seminari La produzione del territorio* [Seminars The Production of the Territory], promoted precisely within the activities of the C.N.R. National Coordination *Produzione Edilizia*, of which Al-

berto Seassaro was Director in those years. It should be specified that the National Coordination represented the informal aggregative phase which, through the definition of organizational models, research themes, and research methods, preceded and laid the groundwork for the formal phase of establishing the CNR National Research Group.

This work lasted more than two years. The speakers' names (Matilde Baffa, Bianca Bottero, Cristina Cocchioni, Massimo D'Alessandro, Paolo Deganello, Mario De Grassi, Giorgio Gaetani, Franco Lattes, Ezio Manzini, Carlo Olmo, Piercarlo Palermo, Antonio Parisi, Giacomo Scarpini, Edmondo Vitiello, Virginia Gangemi, Enrico Fattinnanzi, Sergio Bracco, Gianfranco Carrara, Valerio Di Battista, Giampiero Donin, Remo Dorigati, Giuseppe Turchini, etc.) are clear evidence of the disciplinary plurality, cultural openness, and multiplicity of Italian universities and research institutions involved.

The nature of the themes addressed (*Housing conditions and territory; Production of social services and economic planning; Connection of social services across territorial scales; Building production, economic institutions, and territorial governance; Reorganization of labor in residential construction; Comparison of productive factors in construction; Environmental resources and settlement processes; Research on the production of design; Housing needs and planning of the residential sector; Crisis of the mechanisms of territorial production; Productive structure and labor market in building rehabilitation; Training demand in the productive and reproductive processes of the territory*; etc.), which frame, perhaps for the first time through case studies, the dynamics of the construction sector by observing it from the economic standpoint and its capacity to respond to social needs, orient the extension to construction-sector economies of the inter-sectoral analyses already mature in the study of other industrial sectors, of other product categories and other markets.

The vantage adopted in these reports is innovative because it concentrates attention on the changes under way in a sector considered traditional and little inclined to innovate. The case studies bring to light the initial processes of reconfiguration of the productive structure, the organization of the project-system, and the new professional roles emerging with the introduction of new technologies. They also foreground local specificities dependent on territorial resources and the new problems of economic, social, and even environmental sustainability tied to the evolution of the construction sector as a consequence of its industrial transformation.

This analytical perspective culminated in the 1979 volume edited by Alberto Seassaro, *Storia e struttura del settore edilizio in Italia dal do-*

poguerra ad oggi [History and Structure of the Construction Sector in Italy from the Postwar Period to Today], which synthesizes the findings of research, teaching experiences, and studies promoted and funded by the C.N.R.

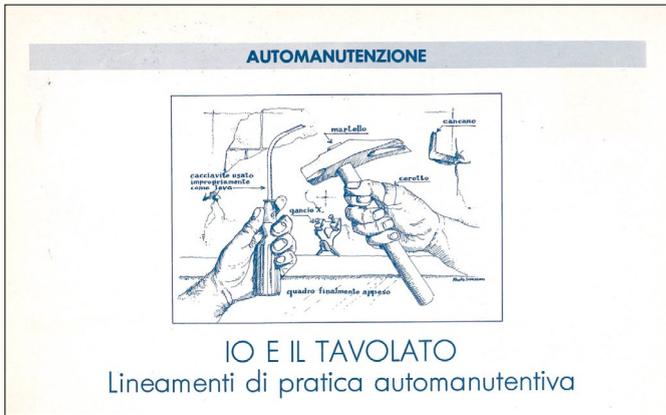
Through the contributions of various authors on the evolution of the structural features of the building production cycle; changes in the dynamics of housing demand and supply; the reorganization of the labor market and site processes; the reorganization of the construction firm and new forms of division of labor; the impact of the regulatory apparatus on the reconfiguration of the sector's features; new modes of producing the project; new technological experiments in construction; and the shift to component-based industrialization, Alberto Seassaro arrives at the definition of the characteristics of a *Terzo ciclo edilizio* [Third Building Cycle]. Characteristics that, in his view, would supplant the economic and planning logics of the two preceding cycles.

It is the starting point of a line of research that would occupy him in the years that followed, characterized by an original approach, alternative to those then in vogue, which were more inclined to theoretical abstraction and to analyzing the world of building production in the form of the decision-making process (see, in this regard, the *1° Congresso Nazionale dell'Area della Produzione Edilizia - Atti - Volume II*, CNR, 3-5 May 1984). Alberto Seassaro chose a path tied to the concreteness of the construction sector's dynamics, while grounding his inquiry on solid theoretical bases, taking as reference the studies of Joseph Schumpeter (1971) and Alfred Marshall (1959). He drew on the former to anatomize innovation processes in the construction industry, distinguishing, in Schumpeterian fashion, among types of innovation concerning new products, new production methods, new sources of supply, the exploitation of new markets, and alternative ways of organizing a firm. And, in a decidedly innovative move for studies in this specific sector, he followed Marshall's teachings to launch a meticulous, long-term research effort on the construction *indotto* [supply-chain spillovers] and on the logics of the geographic and territorial concentration of firms producing intermediate goods, with the aim of sharing resources, know-how, and labor, creating external economies to bolster competitiveness (*1° Congresso Nazionale dell'Area della Produzione Edilizia, Atti - Volume II*, 1984, pp. 389-400).

We find this thorough, meticulous analysis the following year in *Produzione edilizia e tecnologia dei materiali* [Building Production and the Technology of Materials] (Seassaro, Macchia, eds., 1985), which considers the evolution of materials, components, and semi-finished products used in the construction industry (cement, binding agents, steel products, reinforced-concrete structures, mortars, cement-based manufactured elements, bricks, plasters, infill walls, marbles and stones, assembly technologies, etc.) and relates them to all the soft processes (knowledge acquisition, design activities, reorganization processes, etc.) required for their working and implementation in the built artifact, thus reconstructing, starting from the basic product categories, the dynamics of the sector's industrial supply-chain spillovers.

In addition to edited volumes of conference and seminar contributions, Alberto Seassaro's oeuvre also includes the curatorial format of *collections* of pieces that had appeared in journals and were republished in book form. Assembling and juxtaposing essays distant in time and cultural imprint once again serves to articulate and deepen issues in technological culture, allowing their different latitudes – and their evolution – to be appreciated. An example of this way of gathering and comparing contributions already published in journals is the substantial volume *Progettazione e gestione del processo edilizio industrializzato* [Design and Management of the Industrialized Building Process] (Seassaro, ed., 1979), with a preface by Giuseppe Ciribini. The articles, collected and catalogued by thematic areas, are excerpted from issues of the journal *Prefabbricare* from 1968 to 1973. The thematic sections: *Premesse di metodo* [Methodological Premises]; *Il design per l'edilizia industrializzata* [Design for Industrialized Building]; *La normazione e coordinazione dimensionale* [Standardization and Dimensional Coordination]; *L'organizzazione del processo edilizio industrializzato* [Organization of the Industrialized Building Process]; *I fattori strutturali* [Structural Factors], contain contributions that define new disciplinary frontiers and methodological practices introduced into the corpus of architectural design culture by industrial procedures; that show interest in meta-design procedures for industrialized building; that highlight the connections between the production of the project and the production of the built artifact and the effects these have on the aes-

Figure 10.
 Sketch by Alberto Seassaro
 in *Recuperare. Edilizia Design
 Impianti*, n. 31, 1987.



thetic component; that address modularity and industrialized components and their relationship to project and process management. They identify the importance of the design of

the industrialized building component and of attention to detail. Along this path, two cultural touchstones stand out: Giuseppe Ciribini, with the themes of complexity, systems, and the search for structural links among factors, as found in *Introduzione alla tecnologia del design. Metodi e strumenti*

logici per la progettazione dell'ambiente costruito (Ciribini, 1978) and *Tecnologia e progetto. Argomenti di cultura tecnologica della progettazione* (Ciribini, 1984); and Giacomo Scarpini, with his focus on process actors and on the impact of political logics in the organizational evolution of production.

As we approach the 1990s, his output also includes numerous journal publications (*Recuperare, Prefabbricare, Modo*, etc.) addressing the industrialization of components and building systems, sector policies, and housing issues. The range runs from pieces in technological culture, where the extensive experience gained during the Montecatini Edison years designing prefabricated elements clearly surfaces, to delightful texts (see, for example, *Io e il tavolato. Lineamenti di pratica automanutentiva* [Me and the Stud Wall: Outlines of Self-Maintenance

7. Alberto Seassaro, *Io e il tavolato. Lineamenti di pratica automanutentiva*, in *Recuperare. Edilizia Design Impianti*, n. 31. [Document](#) →



Practice], 1987 [72](#)) offering user guidance on how to handle the small problems of *edilizia della quotidianità* [everyday building/maintenance], providing advice, in the form of a *vademecum semiserio* [semi-serious vade mecum], to make users, where possible, independent of the building trades' supply chain (electricians, masons, plumbers, window-and-door fitters, etc.). It was an intuition, still embryonic, of the need to educate users, to transmit and share experience, which today has found wide diffusion online.

These themes kept him engaged until the mid-1980s. From the late 1980s through the 1990s his research turned to environmental design,

in collaboration with ENEA, ANIE, the Istituto Galileo Ferraris in Turin, ENEL, AIDI (Associazione Italiana di Illuminazione), and others, developing, in particular, the subject of natural and artificial lighting. The theme of light retraces, deepens, and reinterprets the early interests of his career: experimental aesthetics, the world of forms, and the role of light in shaping forms and surfaces.

The revival of these early thematic interests is tied to his new academic placement in the newly founded *Facoltà del Design* [Faculty of Design], where, starting in 1993, he would conduct his teaching and research activities.

The book reorganizes and systematizes the findings of the permanent seminar on construction materials technology, launched from the 1983/84 academic year within the Technological Track.

With the new reordering of studies in the Faculties of Architecture, introduced by law (DPR 920 of 31.10.81), a series of significant innovations were established [...]. With DPR 920, then, a formally defined technological disciplinary area was constituted, remarkably broad in scope, encompassing a wide arc of teachings that range from design disciplines such as industrial design, environmental design, and the technological culture of design to programmatic–normative subjects such as Methods and techniques of building standardization, production-oriented subjects, and those more specifically technological. From our standpoint as scholars of building production, who have long worked to establish this line of inquiry, [...], the *Tecnologia dei materiali da costruzione* [Technology of Construction Materials] reappears, significantly, a course which, although belonging to the traditional academic corpus of architectural studies, had in recent years been deactivated everywhere and removed from curricula. The reinstatement of this discipline, in this renewed context, has taken on for us a particularly important meaning for interpreting trends present in contemporary architecture. [...].

Construction materials represent, for Architectural Technology in general – and particularly for disciplines that approach this study from the productive viewpoint – the central element in the *construction of the artificial environment*, the basic principle of

the *transformation of the physical environment*, the constitutive production factor of the building process itself: the matter to which flows of labor, information, and energy are applied in the act of producing architecture.

Technological innovations, operating inexorably at the levels of materials and components production, of changes in technological know-how, in construction procedures, in the organization of site labor, and in corporate organization, have transformed the building product in substance, profoundly altering the construction tradition. Its outward appearance remains what it has always been, but the materials and components have changed in depth. All the technological innovations brought to materials in this sector lack any morphological and symbolic elaboration; they have not become language. The image of the house conceals the technological innovations it has absorbed in its production process; in construction, innovation is a *hidden innovation*. To use a familiar metaphor: if the industrial process has made the oil lamp into the electric lamp and the carriage into the automobile, the house has remained a house, one essentially alien to any innovative quality. Alberto Seassaro's interest is to treat the general issue of materials in the construction sector by seeking to arrive at a definition of the concept of material that links it to the evolution of the factors of production [...]. Construction, the sector that materially produces architecture, risks appearing as a separate, placid island, resting on the certainties of an idealized and ideologized tradition which, repudiating the innovative vocation historically expressed by the architectural avant-gardes, lingers in elaborating its own specific, particular postmodern discourse that cannot manage to be post-industrial, just as the modern movement had failed to be industrial. (*Produzione edilizia e tecnologia dei materiali*, edited by Alberto Seassaro and Cesira Macchia, 1985, Preface, pp. 1-4)

8.4 Institutional Projects

The 1970s and '80s were, for Alberto Seassaro, a veritable training ground of projects for the university institution.

normativa e metodologie di progettazione

Atti del seminario promosso dal GRUPPO NAZIONALE C.N.R. "PRODUZIONE EDILIZIA" tenutosi presso la sede dell'INARCH, Roma, giugno 1979

a cura di Alberto Seassaro

relazione generale di Enrico Fattinanzi
interventi di: Sergio Bracco, Gianfranco Carrara, Margherita De Simone, Valerio Di Battista, Gianpiero Donin, Remo Dorigati, Pietro N. Maggi, Elena Mortola, Antonella Ottai, Giovanni Salvestrini, Alberto Seassaro, Giuseppe Turchini.



la produzione del territorio settore delle costruzioni e programmazione edilizia

Atti del seminario promosso dal GRUPPO NAZIONALE C.N.R. "PRODUZIONE EDILIZIA" tenutosi presso la sede dell'INARCH, Roma, giugno 1979

a cura di Alberto Seassaro

relazione e interventi di: Matilde Baffa Rivolta, Bianca Bottero, Cristina Cocchioni, Massimo D'Alessandro, Paolo Deganello, Mario De Grassi, Giorgio Gaetani, Franco Lattes, Tamara Levi, Ezio Manzini, Carlo Olmo, Piercarlo Palermo, Antonio Paris, Giulio Rizzo, Giacomo Scarpini, Alberto Seassaro.



Ezio ARLATI
Aurelio CORTESI
Paolo DEGANELLO
Valerio DI BATTISTA
Leonardo FIORI
Stefano GARAVENTA
Roberto QUERCI
Riccardo SARFATTI
Giacomo SCARPINI
Fabrizio SCHIAFFONATI
Alberto SEASSARO
Claudia SORLINI
Oliviero TRONCONI
Francesco VANNUCCINI
Edmondo VITIELLO

a cura di Alberto SEASSARO

STORIA E STRUTTURA
DEL SETTORE EDILIZIO
IN ITALIA DAL DOPOGUERRA A OGGI



progettazione e gestione del processo edilizio industrializzato

a cura di
Alberto Seassaro
prefazione di
Giuseppe Ciribini

Testi di: L. Bandini Bui, A. Bolocan, A. Castellini, G. Ciribini, G. Drengali, F. De Miranda, Gillo Dorfles, M. Foti, E. Fraelli, F. Giampicco, G. Giusti, L. Goffi, G. Guarniero, D. Leonesi, F. Levi, P. N. Maggi, L. Martelli, A. Mancini, A. Migliacci, J. Moravia, G. Nanni, G. Oberti, C.P. Odoaschini, M. Peggari, H.P. Parenteau, L. Perronace, R. Rossi, L. Serpaolini, F. Santagostino, A. Seassaro, L. Seassaro, M. Simonazzi, N. Sinigoi, G. Turchini, G. Urbani, E. Zambelli.





Figure 11. Excerpts from Alberto Seassaro's published output (late 1970s–early 1980s).

This terrain was, in fact, the further site of his *maturation*, where research interests and political vocation were fused. Freshly graduated, in the mid-1960s, he and Ugo La Pietra advanced a proposal to establish a *Centro di Arti Visive* [Center for Visual Arts] within the Faculty of Architecture. The project never came to fruition, but it already signaled his bent for designing organizational transformations aimed at nurturing specific cultural domains. In the 1970s, more mature yet still without a formal university role, he developed a series of proposals to redefine the *disciplinary areas*, riding the process that, in the years to come, would accompany the birth of degree tracks and the transformation of Institutes into Departments.

In the 1970s, the conditions were in fact laid for a number of key transitions which, over the span of little more than a decade, would lead, in the early 1980s, to the establishment of degree tracks and, subsequently, in the early 1990s, to the articulation of the single Degree programme in *Architecture* into several degree programmes and then into several faculties. On the research side, by contrast, this period saw the emergence of institutes specifically devoted to the education of architects, an embryonic form of what would later become departments as we know them in their current configuration.

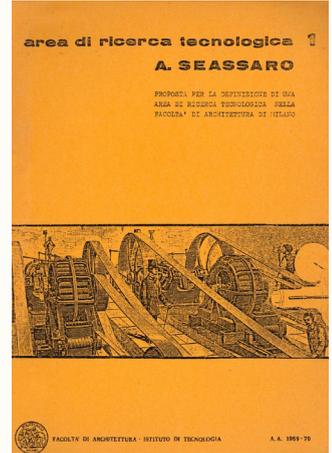
Most of these transformations arose under the pressure exerted by student movements.

Both fronts, teaching and research, saw a not-yet-thirty-year-old Alberto Seassarò engaged in developing contents and tools intended to steer the ongoing evolution, convinced that the students' demands had met, on the institutional side, with little more than merely formal responses.

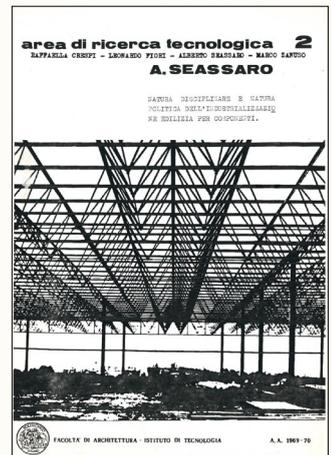
A particularly significant step was the establishment of a *Laboratorio di idee* [ideas laboratory] *per il rinnovamento della cultura tecnica in architettura* [for the renewal of technical culture in architecture], designated as the *Area di Ricerca Tecnologica della Facoltà di Architettura del Politecnico di Milano* [Technological Research Area of the Faculty of Architecture at Politecnico di Milano].



8. Alberto Seassarò, *Area di Ricerca Tecnologica 1, Proposta per la definizione di una area di Ricerca Tecnologica nella Facoltà di Architettura di Milano, A.A. 1969-70.*
[Document →](#)



9. Alberto Seassarò, Raffaella Crespi, Leonardo Fiori, Marco Zanuso, *Area di Ricerca Tecnologica 2, Natura disciplinare e natura politica dell'industrializzazione edilizia per componenti.*
[Document →](#)



10. Alberto Seassaro,
*Area di Ricerca
Tecnologica 3, La
via italiana della
industrializzazione
edilizia*, A.A. 1969-70.
[Document](#) →



The proposal document, co-signed by Marco Zanuso, Raffaella Crespi and Leonardo Fiori (1970), sets out a sharp critique of the reforms introduced by the Faculty in response to student demands, judging them to be empty of content and limited in their impact on education, particularly with regard to the role of research in teaching; the issue of disciplinary obsolescence; the problem of technical qualification on a mass scale, etc. The document concludes by calling for «the commitment to the refounding of the discipline and the design of mass education for an alternative clientele» (p. 28).

Although the document is *dated*, both in certain issues that are closely tied to its historical context and in a language that is fully immersed in the *spirit of its time*, it nevertheless raises many general questions that the university system has repeatedly had to confront whenever social and technological changes have driven projects to reform its educational structures. The ideas laboratory equipped itself with a *Bulletin*, directed for years by Alberto Seassaro, which would mark the various stages in the process of disciplinary redefinition, acting as a megaphone for political and cultural initiatives [8](#) [9](#) [10](#).

11. Progetto di iter
didattico per l'Indirizzo
Tecnologico.
[Document](#) →



These initiatives, like those undertaken at national level by CNR, constitute significant building blocks in the development of a cultural trajectory aimed at promoting the disciplinary autonomy of Architectural Technology.

In the early 1980s, the maturity attained in the organisation and management of complex institutional programmes became clearly apparent in the design and subsequent coordination (from 1981 to 1989) of the degree track in *Architectural Technology* – one of the tracks within the *Corso* degree programme in *Architecture* – which marked the starting point for important experiments and the opening up of new lines of work that would prove to be forerunners of what was to come.

They would in fact anticipate his appointment as Chair of the *Corso di laurea in Disegno industriale* [degree programme in *Industrial Design*] – a role taken on informally in 1993 and formally in 1995 – then as Dean of the *Facoltà del Design* [Faculty of *Design*] in 2000, and finally as the architect of a major university system: the Italian Design

System. The painstaking work underpinning the establishment of this course of study is summarised in this scriptographic table, drafted by him, which sets out the subjects that make up the track [119](#).

While the coordination of the degree track in *Architectural Technology* can be regarded, at the same time, as the culmination of the long transformative process of the Faculty of Architecture and as a springboard for its subsequent innovations, in which Alberto Seassaro would play a prominent role, the theoretical and political outcomes of the cultural and research activities on the structural features of the building system and on the market for technical-intellectual labour in the construction sector are reflected in the founding project of the *Dipartimento di Programmazione e Produzione edilizia* [Department of Planning and Building Production] (1979/80).

In this way, a cycle that had served as an incubator for institutional experience and technological culture came to a close, and a new one opened, whose lineages are not hard to discern: this is the cycle of university *Design*, the testing ground and challenge of an Alberto Seassaro in the full maturity of his academic career.

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