



The elusive polemics of theory and practice: Giovanni Astengo, Giorgio Rigotti and the post-war debate over the plan for Turin

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In 1944 Turin's city officials announced a competition for a new General Plan that began a long debate between architects and planners. Prior to and following the competition, intense political and professional polemics emerged: among others, it involved Giorgio Rigotti, a locally renowned planner, and Giovanni Astengo, a key protagonist in Italian post-war town planning. Sharing a common cultural and professional background, Astengo and Rigotti (the author of the plan subsequently adopted by the city) seemed only to differ in their political affiliations and ideological beliefs. Specifically, the difference between the two positions was the degree to which each emphasized the question of implementation. In fact, the polemics that preceded the adoption of the plan (1956–59) may be considered emblematic of one of the most contentious issues in planning: the problematic relationship between theory and practice.

The context

In 1943, the city of Turin was seriously damaged by allied bombings. The main targets of the raids were the industrial areas, but many bombs hit the residential and also the historical part of the city; at the end of the war, more than 230 000 rooms and 10 000 buildings intended for industrial use were destroyed or heavily damaged. Both this destruction and the expiration of the previous city plan of 1913 prompted, in 1944, city officials to commission a group of experts (among them, the architect Armando Melis de Villa and the engineer Giorgio Rigotti) to undertake the study for a new plan. However, this appointment was revoked after the Liberation by a civic council installed by the Comitato di Liberazione Nazionale (CLN), the organization of the Resistance movements: in fact, being a result of a decision made outside democratic control (the municipal authorities were not elected but appointed by the central government), it appeared manifestly as in continuity with the Fascist regime. After the municipal elections of

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November 1946, won by a Communist and Socialist coalition, the municipality organized a competition for a new general plan: the push to resume studies for a new plan was in part due to the presence of Giulio Casalini in the mayor's cabinet, a socialist who was appointed vice-mayor and chief of the department of buildings.

Both the socioeconomic and political situation of post-war Italy were not of help in expediting the procedures for the adoption of a new plan; in that very short lapse of time, in fact, fundamental changes for the future configuration of the country occurred, such as the abolition of the monarchy in favour of a republic, in June 1946, and the ratification of a new constitution, in December 1947. The announcement for a competition only became official at the beginning of 1948 [1]. Among the requirements of the competition brief were generic aims such as the increase of sport and tourism activities and the preservation of both the historical centre and the hill, a partially uncompromized green resort on the east side of the city. At the core of the brief was the idea that Turin should manifest its historic vocation as an industrial city, for instance through the amelioration of the working-class standard of life. This idea seemed to reflect the tensions between post-war international and national political and economic policies: between the American imperative aimed at creating a new European economic system based on free market and expansion of national incomes, and the opposition of part of the national political élites and state bureaucracy, more attentive to maintaining some elements of continuity with the Fascist regime [2]. Although planning for the district or region was not seen as essential to the city plan, the announcement did request that some consideration be given to the 'zone of influence' of the expanding metropolis [3].

It is also important to recall the historical context in which the competition was announced: reconstruction gave the opportunity to apply the 1942 National Town Planning Act. The act – better known as 'legge urbanistica 1150/1942' – was a compendium of 20 years of debate and, consequently, the result was a complex compromise of positions elicited by several social actors involved in its definition (different professional groups, ministerial offices, etc). Often seen only as a Fascist and therefore antidemocratic measure, the act, in reality, well represented the complexity of a regime in which sometimes diverging forces were acting [4]. At the same time both innovative and conservative – for instance, it completely accepted Italian anti-urban doctrines of the 1930s – the act abolished the separation and autonomy of plans at different scales and gave the municipality the faculty, but not the obligation, to undertake the adoption of general plans. It was innovative in that it permitted municipalities to fix specific land uses and building standards through the definition of homogeneous zones of intervention [5]. For these reasons, at least in the immediate post-war years, the act was perceived by the Italian planning community as a contribution to the implementation of 'modern' town planning policies in Italy.

The choice of a competition, as a way to select both the project and the designer, reflected the need of Italian authorities to legitimise the newly established democratic order after years of Fascism. The implied ideological necessity of demonstrating or legitimating democracy through an open competition paralleled the necessity for the rapid execution of new buildings and the urgent needs of the post-war city. Conflicting intentions pervaded the debate: the architect and planner Giovanni Astengo, for instance, suggested in 1947 a compromise solution of a 'public discussion-competition' with a limited number of participants in order to speed the adoption of a General Plan and avoid the reconstruction

of the city through an array of zone-oriented building plans, fundamentally unrelated to one another [6].

In keeping with the notion of a competition as democratic, the adjudicating committee was also selected on the premises of political and democratic representation. The committee was chosen by the municipality in October 1947 and among its 13 members were important figures from the local professional milieu such as Giovanni Chevalley; from the Italian architectural scene such as Piero Bottoni and Giovanni Muzio; from the political, intellectual and economic élites such as the above mentioned Casalini and the industrialist Adriano Olivetti [7]. Nineteen projects were submitted to the competition; a 20th project was excluded having been submitted after the deadline of 30 August 1948. Entries came from many important contributors to post-war Italian architecture such as Luigi Dodi, Ignazio Gardella, Franco Albini, and Eugenio Gentili Tedeschi. Giorgio Rigotti and Giovanni Astengo submitted one and two projects respectively [8].

Rigotti's and Astengo's proposals

Rigotti's proposal for the competition, submitted under the motto *Ordinare e progredire* (To order and to progress), focused primarily on the re-arrangement of the city's traffic circulation and zoning; the problem of traversing the city by vehicles was solved by means of a ring highway [9] (Fig. 1). The location of activities was carefully managed and the plan did not modify radically the existing order of the city. An intensified concentration of productive activities was encouraged in the traditionally industrialized districts, while mixed areas were envisaged in the inner part of the city (Fig. 2). This approach was not original at all; it reflected the common organization of many northern Italian industrial cities.

One of Astengo's proposals for the competition, the so-called *Nord-Sud* (North-South), was a continuation of an earlier proposal (Figs 3 and 4). In fact, in a well known 1947 issue of the review *Metron*, he had presented a project for a Regional Plan for Piedmont, covering a large part of the region surrounding Turin, under the authorship of the ABRR group (Astengo, Nello Renacco, Aldo Rizzotti and Mario Bianco) [10]. The plan had previously been presented – in a schematic version – in December 1945 at the 1st Convegno Nazionale per la Ricostruzione Edilizia (National Symposium for Building Reconstruction) organized by Enrico Peressutti of the BBPR architectural studio in Milan [11]. The basis of the ABRR proposal was decentralization and to this end it suggested a north-south thoroughfare – a system of highways – to efficiently traverse the city [12]. (Figs 5 and 6). Astengo, Renacco, Rizzotti and Bianco conceived the plan as part of a bigger project for a *nastro produttivo padano* (productive strip of the Po Valley), an infrastructural scheme that embraced all Northern Italy and explicitly alluded to models like the linear-cities [13]. The proposal for the competition of 1948 only concerned the metropolitan area: hence its relation to the previous studies for the regional plan was seemingly based on the assumption that a fragment of a more general project could become an autonomous proposition.

The proposed project predicted two housing units for 100 000 inhabitants, south and north of the city; a third smaller unit (for 35 000 inhabitants) was to be set in a south-west area, in proximity to the Fiat–Mirafiori plant, the construction of which had begun just

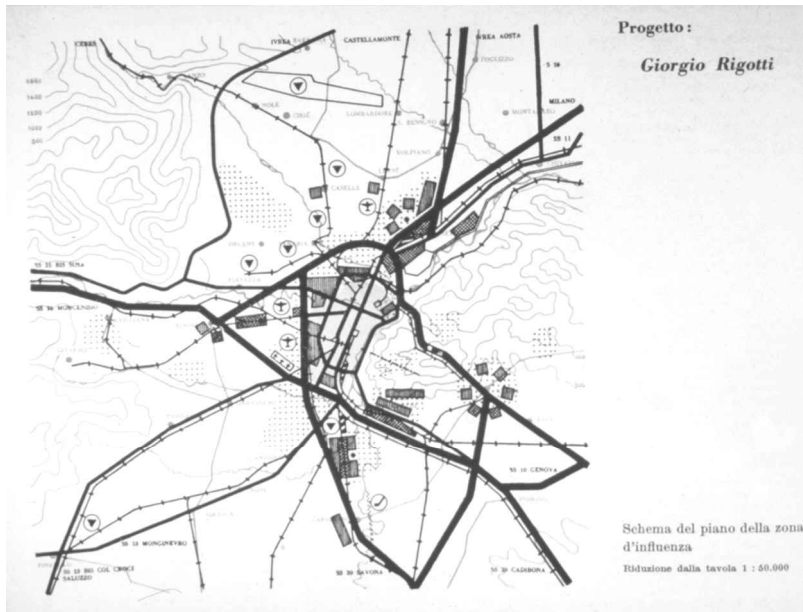


Figure 1. G. Rigotti, 1948 competition proposal for the plan for Turin, scheme [from: *Urbanistica 1* (1949)]. In this scheme for the ‘plan of the zones of influence’, a highway ring is proposed to solve the problem of crossing the city; the ring encircles the conurbation from the West while, in the East, communication is provided by a road traversing the hill. The city remains basically untouched, together with its road structure.

before the war (Fig. 7). Decentralization had been suggested during the war and the early post-war years, and certainly was not a novel idea for ABRR. Proposals for satellite-cities outside Turin, in fact, had appeared in several local newspaper announcements between 1944 and 1945 [14]. The goal was to define external or peripheral development while avoiding direct confrontation with the fabric of the existing city and it seemed to recall these earlier proposals.

Curiously enough, in the 1948 competition, Astengo, Renacco and Rizzotti, together with Franco Albini and Ettore Sottsass Sr., had presented another proposal in which all solutions for rapid movement across the city were omitted. In reality, the main concern that seemed to have appealed to all the participants in the competition was the attempt to leave the historical centre untouched, in accordance with one of the brief’s requirements: the same north-south thoroughfare proposed by the ABRR carefully tried to go around it and avoid the penetration in the most monumental part of the city.

The protagonists

Giorgio Rigotti (Turin, 1905) graduated as a civil engineer at the Polytechnic School of Turin in 1927. Son of a renowned local architect, Annibale Rigotti, he had contributed to

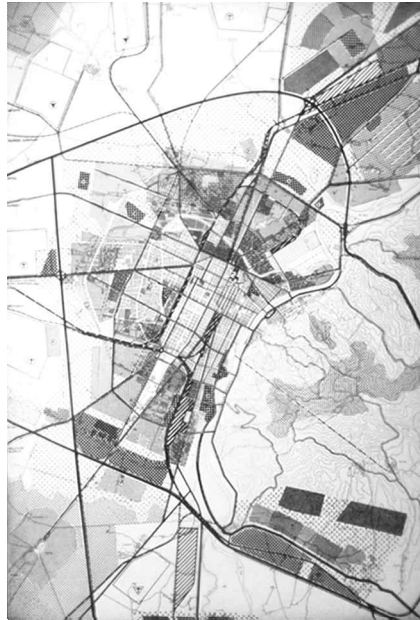


Figure 2. G. Rigotti, 1948 competition proposal for the plan for Turin [from: *Urbanistica*, 1 (1949)]. This plan clearly shows the persistence of the city grid; a limited number of the local interventions are planned for the centre where productive activities are mixed with residence. At the extreme south of the conurbation, the area occupied by the Fiat-Mirafiori plant is expanded for industrial use.

the review *Urbanistica* since its foundation in 1932. As a book reviewer for *Urbanistica*, Rigotti was well informed about the international town planning scene (especially of the German and Anglo-American world) and had participated in international congresses and competitions. As a planner and architect, he also had a long career as an educator at the Polytechnic School of Turin where from the early 1930s he taught courses in 'composition' 'architectural details' and 'drawing' [15]. Lastly, Rigotti's book *Urbanistica*, published in two volumes in 1948 and 1952, was influential to the extent that it enjoyed a wide circulation throughout Italy and abroad [16].

Giovanni Astengo (Turin, 1915 – San Giovanni in Persiceto, 1990) graduated in architecture in 1938 from the Polytechnic School of Turin where he had studied with Giovanni Muzio. In 1943, Astengo began teaching 'building elements' at the Polytechnic. In 1949, Giuseppe Samonà called him to the Istituto Universitario di Architettura di Venezia (IUAV) to teach 'town planning'. In the early post-war years, Astengo was active in promoting modern architecture and planning, and in organizing related initiatives. In 1945, for instance, he was one of the founders of a study group for modern architecture dedicated to Giuseppe Pagano and destined to become the Piedmontese section of the Associazione per l'Architettura Organica (APAO – Association for Organic Architecture) [17].

Astengo would later claim that it was Luigi Piccinato, one of the 'founding fathers' of modern Italian planning, who invited him and ABRR to publish the Regional Plan for

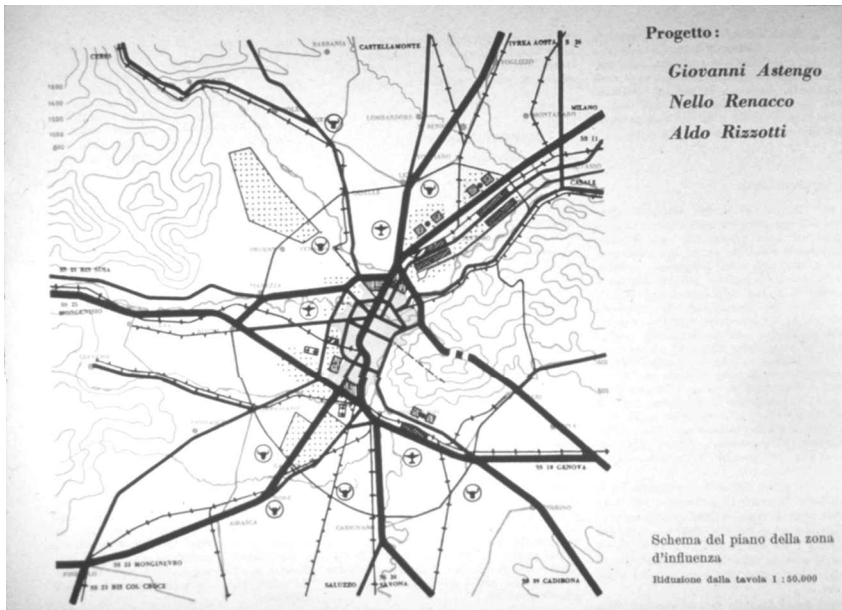


Figure 3. G. Astengo, N. Renacco, A. Rizzotti, 1948 competition proposal for the plan for Turin, scheme [from: *Urbanistica* 1 (1949)]. In this scheme, a north-south thoroughfare traverses the city, dividing it in two parts; this new artery follows the existing railway route and connects the road to Genoa (in the south) to the roads to Ivrea-Aosta and Milan (in the north).

Piedmont in *Metron* [18]. However, the connection of the review to the APAO could possibly explain this opportunity since *Metron* was at that time edited by the noted historian and critic Bruno Zevi, one of the founders of the Association. Astengo was also mentioned in *Metron* with reference to the International Building Exposition of Turin in 1946 for his contribution to town planning in the section devoted to Architecture and Building Technique [19]. Moreover, it is important to recall Astengo's close commitment to Adriano Olivetti and the *Movimento di Comunità*, the political and social movement founded by the industrialist immediately after the war [20]. In the reconstruction years, Olivetti involved Astengo in the re-organization of the Istituto Nazionale di Urbanistica (INU – National Institute of Town Planning), already active in the 1930s, and in re-establishing the review *Urbanistica*. In 1950 and 1951 Astengo was charged with the vice-presidency of the Institute and the directorship of the review from 1952 to 1956 [21].

One can consider the Plan for the Aosta Valley of 1936 – sponsored and supervised by Olivetti as formative and a point of departure for Astengo's methodology [22] (Fig. 8). The plan, which was based on a social survey of indigent Alpine populations, made a prescient suggestion that the Aosta Valley should take on a tourist vocation. Perhaps its most significant contribution was that it acquainted Italian architectural culture with experiences from international planning and the Modern Movement. In the proposals for the Aosta Valley, the presence of architects such as Piero Bottoni and Gino Pollini was fundamental.



Figure 4. G. Astengo, N. Renacco, A. Rizzotti, 1948 competition proposal for the plan for Turin [from: *Urbanistica* 1 (1949)]. This plan makes evident the design of the thoroughfare: it follows the railway on a by-pass route that avoids cutting through the fabric of the historical part of the city. Note the presence in the peripheral areas of residential units whose plan shape recalls British and Scandinavian examples: one of these units is placed on the north side of the Fiat-Mirafiori plant.

As members of the CIAM from the beginning of the 1930s, Bottoni and Pollini (with the other contributors such as Gian Luigi Banfi, Enrico Peressutti, Ernesto Nathan Rogers, Luigi Figini and Ludovico Barbiano di Belgiojoso) introduced to Italian town planning the ideas propagated by the Modern Movement. *La Charte d'Athènes*, whose principles were defined in 1933 but which was published only in 1943, is an example of an influential source [23].

To untangle the complexity of political positions held by many Italian intellectuals during the transitory period between Fascism and the early Republic is a difficult undertaking. For that, it is hard to estimate Rigotti's and Astengo's opposition in terms of political and ideological background. Rigotti's conciliatory political commitment led him to a certain proximity to the centre-right wing of the city political forces, as the successive involvement by the Christian Democratic Party in Turin's plan studies will reveal. Astengo, on the contrary, was renowned for his proximity to the Socialist Party and later, in 1964, he was elected as a representative of the Socialist Party for the City Council. This affiliation contributed to Astengo's reputation as socially and politically committed and led many observers to read an ethical dimension into his methodology and position [24]. Also, this public characterization was strengthened by his assertion that town planning played a fundamental role in the 'gestation of a new orientation of civilization' [25], a statement whose sense was closely related to the enthusiasm for Italy's new republican status.

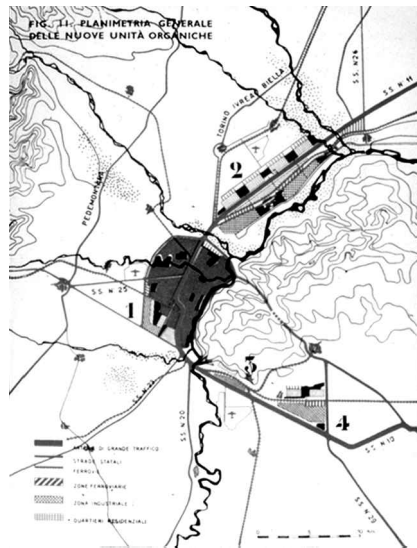


Figure 5. ABRR, project for a Regional Plan for Piedmont, general plan of the housing units, 1947 [from: *Metron 14* (1947)]. Together with the north-south thoroughfare, in this proposal the hierarchy of roads is evident. With the grid pattern are represented the industrial (diagonal pattern) and residential areas (vertical pattern). Numbers 2 and 4 show the two 100 000 inhabitants housing units, number 1 the 35 000 inhabitants unit.

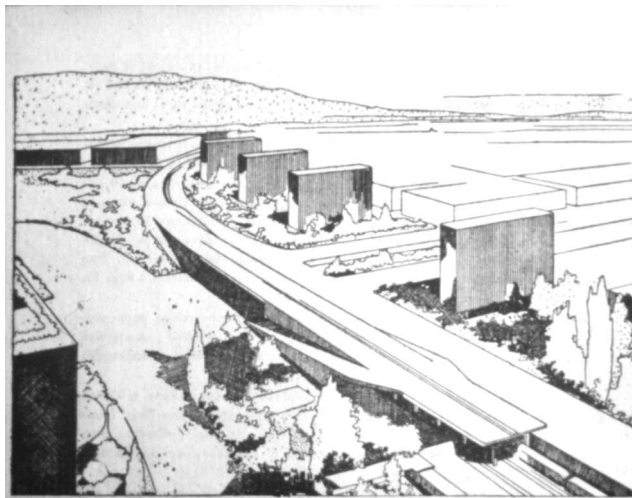


Figure 6. ABRR, project for a Regional Plan for Piedmont, detail of the urban highway, 1947 [from: *Metron 14* (1947)]. In this drawing the urban highway covering the existing railway route is visible; new housing blocks, on the side of the artery, contrast with the uniform 19th century skyline of the city and recall examples of the Modern Movement tradition. Clearly visible in the background is the profile of the hill bordering the city to the east.

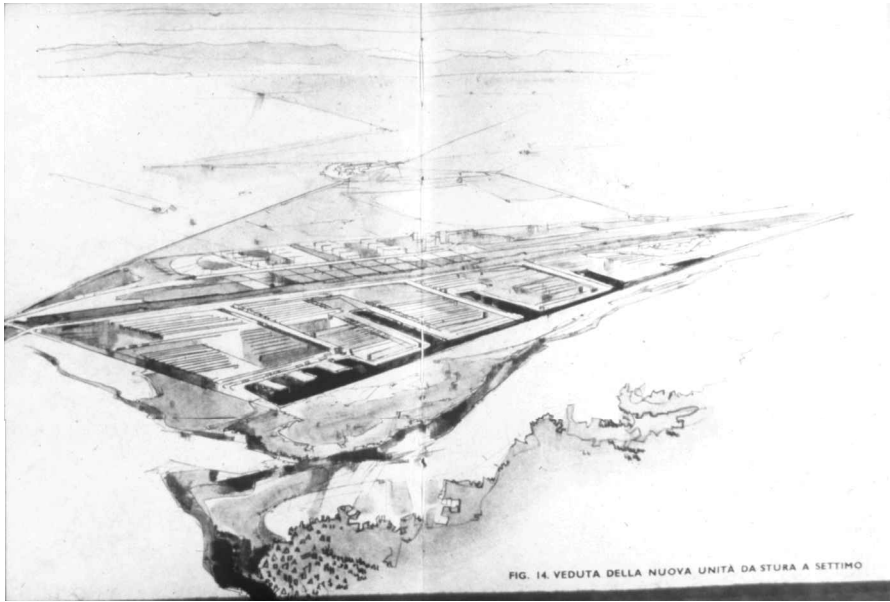


Figure 7. ABRR, project for a Regional Plan for Piedmont, housing unit for 100 000 inhabitants north of the city, 1947 [from: *Metron* 14 (1947)]. This image, taken from the hill, shows the area corresponding to the housing unit numbered 2 in Fig. 5. In the foreground are factories and a river port; in the background, across the highway to Milan, is the 100 000 inhabitants housing unit.

Testimonies at the time of his death emphasized Astengo's contribution to the 'democratic recovery of social community', rather than to a new theory of town planning [26]. By comparison, Rigotti was, perhaps, less politically committed but more politically adept.

Methods and statements

The competition of 1948 had no positive results. Not only did the jury fail to award a first prize but none of the ideas generated by the entries was put into operative effect [27]. The commission's final verdict was that no project had qualities of 'preeminence' above others; the awarded projects were simply displayed in a local exhibition. Many were the reasons that had a part in leading to this unfortunate outcome: the very tense political situation of the time (the campaign for the national elections of April 1948 had been particularly violent) clearly interacted with a presumed lack of finance. Later, in January 1950, the municipality appointed a new general commission (composed of 34 members) their task being to resume the studies for the plan. The attention of the city's political élite was also partially diverted to the realization of local plans and large housing complexes: the project of the famous housing quarter of La Falchera, in the northern periphery of Turin, had been approved in October 1949. Finally, in June 1950, the plan's progress encountered a further obstacle. Furious polemics exploded around the illegal construction of four additional



Figure 8. E. Barbiano di Belgiojoso and P. Bottoni, Plan for the Aosta Valley, model of the Plan for the 'Conca del Breuil', 1943 [from: *Studi e proposte preliminari per il Piano Regolatore della Valle d'Aosta*. Ivrea: Nuove Edizioni Ivrea, 1943]. This photomontage of a study-model shows the project for a tourist village in the narrow valley of Breuil, at the foot of the Italian side of the Matterhorn: it is one of the projects composing the Plan for the Aosta Valley. Note the geometrical planning of the station, in sharp contrast with the topography of the site. The Plan for the Aosta Valley, as the Regional Plan for Piedmont, was based on a broad preliminary survey.

storeys on a city centre skyscraper, involving the vice-mayor and department chief Casalini. Accused of being in the pocket of the building contractors, Casalini was forced to resign.

But, even though the plans were inoperative, the results of the competition were significant in that they defined a certain consensus among the participants. Most of the proposals marginalized the issue of real estate and market conditions, and instead focused their solutions on problems of traffic circulation by revising the existing road systems. The homogeneity of solutions might be attributed to what has been called the 'persuasive and normative force' of the plan for Turin of 1913 [28]. The 1913 plan, indeed, had defined Turin's urban order through a reaffirmation of both the baroque and neo-classical orthogonal city grid of the centre and the radial structure of the periphery. For the first half of the century, this configuration had been assumed by planners and local authorities as the best fit for the city.

After Casalini's resignation, the commission formed at the beginning of 1950 was replaced by a smaller one that also included well known local professionals such as Giovanni Chevalley, already active in the pre-war years. Politically, Chevalley was a true crossbencher, although he had a reputation as a conservative. Not surprisingly, with the June 1951 municipal election victory by the Christian Democratic Party and its centre-right

wing allies, Chevalley was called to chair a newly established commission. Among its members was Giorgio Rigotti who was assigned the task of the practical drafting of the General Plan. The work of the commission lasted more than four years; the results of its activities were presented to the public at the end of 1955 and the general plan was voted and approved by City Council in April 1956. The left-wing opposition accused the municipality of extending this preliminary work and linked it to what they claimed to be a resistance against centrally planned reconstruction by those politicians linked to building speculators.

The contrast between Rigotti and Astengo definitively revealed itself during the years between the failure of the competition and the adoption of the plan by the municipality in 1956. Given that Rigotti and Astengo apparently were of different ideological stances (at least in relation to their commitment to the city's political forces), it is interesting to make a comparison between their notions of the role and profile of the town-planner. In 1947, in the introduction to the first of two volumes of the text *Urbanistica*, Rigotti described his conception of town planning as a 'complex of arts and sciences'. The two areas designated for study were: composition, which 'materializes the creative idea', and technique, which gave the town-planner 'his tools of the trade' [29]. In Rigotti's opinion, the *urbanista* (the town planner with an engineering or architecture background, accordingly to the Italian tradition) had to possess three characteristics: 'deep analytical qualities allowing him to schematize essential elements, to study them profoundly, to classify; precise qualities to synthesize, guiding him in the search for solutions on the basis of what analysis provides; and finally and above all a great balance [...] to give solutions, both technically and artistically, an indispensable eurhythmy to the best human works' [30].

For Astengo, 'town planning science', like statistical demography or human geography, was a 'social discipline'. As he wrote in a 1947 issue of *Metron*, town planning was divided into 'analytical', 'theoretical', 'historical', and 'practical' components and its sub-specialization of 'analytical town planning' was 'definitively a branch of statistics' [31]. The same issue, in fact, was largely devoted to statistical reports, ranging from orography to meteorology, and maps, graphs and diagrams occupied a large part of the proposal for the Regional Plan for Piedmont. Such an approach had an established tradition in Turin's intellectual history. In the late 19th century, in fact, institutions such as the Laboratory of political economy at the University or the Museo Industriale (the future Polytechnic School), and periodicals such as *La Riforma Sociale* or *L'ingegnere Igienista* and *L'ingegneria Sanitaria* – both more concerned with the problem of hygiene – initiated a debate on housing and labour productivity using statistical analysis of demographical data [32]. Some years later, the Turin section of the INU, which also included regional centres in Milan and Rome, inherited this tradition. Therefore, Turin can be considered the locus of Italian town planning studies prior to World War II.

Both Astengo and Rigotti insisted that analysis and hard knowledge precede any attempt to design. Here the difference between the two lies in the specific aims of analysis and knowledge. Astengo insisted that the point of departure had to be a 'knowledge of factual reality'. This 'reality' was accomplished by means of statistical surveys and 'scientific' observations. ABRR's references to Francesco Mauro's writings on rationalization of production were significant to *Metron's* proposal for the Piedmont plan [33]. Mauro, president from 1919 of the Italian Association of Engineers, played a key role in the

diffusion of the knowledge of American industrial production systems in Italy. In 1926 he was among the founders of the Ente Nazionale per l'Organizzazione Scientifica del Lavoro (ENIOS – Italian National Corporation for the Scientific Organization of the Work), whose journal, *L'Organizzazione Scientifica del Lavoro*, published articles on taylorism and fordism. Some of these articles took the form of travel reports documenting studies of the American system of industrial production [34]. In 1935, *L'Organizzazione Scientifica del Lavoro* published an article by Mauro on the Aosta Valley Plan [35]. Mauro's writings all dealt with the problem of the location of productive units based on scientific systems of costing and time determination; his position on the incompatibility between industry and residence probably informed some of ABRR's zoning choices in the Piedmont Plan.

Mauro's concern, at least in the 1920s and 1930s, was the necessity of rationally organizing production and increasing worker purchasing power through higher salaries in order to develop and sustain a strong internal market. This pointed to a perceived weakness in Italian processes of modernization. From an altogether different political position, a similar consideration was posed by Antonio Gramsci in the *Notebook* #22 [36]. Gramsci, of course, had arrived at the same conclusion in reasoning about the conservative and antirevolutionary attitude of the Italian bourgeoisie. Such a consonance of views reflected an aspiration that was shared by diverse political and intellectual milieus. These goals should have had an important effect on some post-war experiences; through them, for instance, one can begin to comprehend Olivetti's economical and political agenda which, in the 1940s and 1950s, seemed to mirror these very same objectives.

Conversely, Rigotti based his knowledge on an analysis of the real-estate market and claimed that his goal was to mediate between 'the market's expectations' and 'good town planning canons' [37]. Rigotti's practice was based on the attempt to adapt planning continuously to the dynamics of the land market, through an often compromised reference to its disciplinary tools: he referred to the *attuabilità pratica* of the plan, that is, the plan's potential to be put into effect [38]. Here Rigotti favoured strict technical regulation, such as zoning, while Astengo was sceptical of such enforcement.

Models and references

One can discern some of the differences between Rigotti's and Astengo's positions through their direct and indirect citations and use of disciplinary sources as a key to modern town planning. In fact, they appealed to the same town planning culture and shared the same set of references, albeit to rather different ends. In the proposals offered by Astengo for a Regional Plan for Piedmont he frequently cited the 'classics' of 'rationalist' or 'functionalist' architectural culture of the 1930s. The references were not simply analogical but of a conventional nature; for example, in *Sul soleggiamento degli edifici di abitazione*, *Metron* 9 (1946), he employed a method proposed by Walter Gropius at the 3rd CIAM in Brussels for the calculation of lighting requirements [39]. Astengo also made use of Le Corbusier's and Ascoral's *Les Trois Etablissements Humains* (1945) and, in a striking visual congruence, of Le Corbusier's reconstruction plan for Saint-Dié (1945). Not surprisingly, Le Corbusier's project was published the following year in *Metron* [40].

The models quoted by Astengo can be rounded out with a few other citations. In a 1949

article for *Urbanistica*, Astengo referred to the General Plan for Amsterdam (1935) and to the Dutch town planning tradition as one of the most significant in the latest European town planning activity [41]. His positive consideration of the plan of Amsterdam was due to the primacy given to the role of surveys in determining the design and, not surprisingly, he re-affirmed Sigfried Giedion's charge that H.P. Berlage's plan for South Amsterdam of 1917 was 'formalist' [42]. The same year, in an item for the *Enciclopedia Italiana*, Astengo referred to the Tennessee Valley Authority plan, David Lilienthal's *TVA: Democracy on the March* and Charles Bettelheim's *La Planification Soviétique* [43]. These themes and authors were all familiar to the *Movimento di Comunità* cultural milieu of the time. The writings of E. A. Gutkind and Lewis Mumford, destined in the 1950s to be successfully translated by Olivetti's publishing house 'Edizioni di Comunità', were also familiar sources [44].

Rigotti referred to a more traditional but – in some aspects – more extended lexicon of town planning. He quoted examples from 19th century town planning tradition, like the two emblematic 'paradigms' of Haussmann's Paris and Vienna's Ring; but also models based on the theories of Rudolf Eberstadt or proposals such as the unrealized or partially realized linear-cities of N.A. Miljutin and Arturo Soria y Mata. These references, however, were not unusual. Indeed they were familiar to the local town planning culture of Turin. In 1944, Rigotti published the book *Urbanistica di Guerra? No ... Urbanistica di Pace* [45] (*Town planning for War? No ... Town planning for Peace*). Beyond the linguistic association with Le Corbusier's *Des Canons? Des Munitions? Merci, des Logis S.V.P.*, 1938 – for the title – and *Sur les Quatres Routes*, 1941 – for the contents [46], the book contained references to some studies proposed in 1930 by a well-known Turin scholar, Pietro Betta. Betta – founder with Armando Melis de Villa of *Urbanistica* – devoted these studies to the determination of town dimensions based on a formula linking distance to mobility in relation to time [47]. Using such methodologies, Rigotti, in his book of 1944, proposed a scheme for a 'solar isochronic city', which was a planning model for the expansion of cities applied to the case of Turin [48].

But the most recurring reference in both Astengo's and Rigotti's writings was Patrick Abercrombie's and J.C. Forshaw's 1943 County of London Plan [49]. Astengo's frequent references to British experience were also related to the post-war Italian political scene [50]. In post-war Italy, Britain had become synonymous with a special notion of 'democracy' [51]. As for Rigotti, his quotation of the Abercrombie and Forshaw plan was particularly significant. He quoted the plan in his 1944 *Urbanistica di Guerra? No ... Urbanistica di Pace*, scarcely a year after the original publication when there were few opportunities for such international communication [52]. Substantial parallels to the London plan were part of the ABRR's 1947 project for Turin, such as the fast thoroughfare and related infrastructural solutions. Following Abercrombie and Forshaw's plan for London, ABRR's proposal for a 'functional' system of circulation provided a new structure for the transformation of the city, instead of merely reducing 'traffic congestion and prevent accidents' [53]. This approach displayed a certain theoretical poverty and an incapacity to face concrete urban problems. Similarly, the Italian architectural historian, Manfredo Tafuri, referred to a poverty of conception when speaking of Le Corbusier and the Modern Movement town planning tradition. According to Tafuri, Le Corbusier showed a tendency to circumvent the complexity of urban reality in giving priority to the functional solution of traffic problems [54].

Since Rigotti and Astengo's cultural backgrounds were quite similar, it is important to emphasize another point of contact – the rarity of references to the Italian urban design tradition. In both Rigotti and Astengo's writings – and despite their personal experiences as urban designers – any mention of important Italian examples of the 1930s, such as projects (Bergamo and Brescia's city centres or Rome's Via della Conciliazione) and theorists and architects (Gustavo Giovannoni or Marcello Piacentini) is missing. But despite the congruency or incongruity in their beliefs, Rigotti and Astengo shared similar ideas about the right approach to practice. For both architects, the plan was technically constituted by zoning, models and images garnered from disciplinary examples.

Theory and practice

The adoption of the 1956 plan was followed by an intense political debate and a large degree of protest; around 2000 petitions were addressed against the plan. Polemics inflamed to the point that, in 1958, the Communist representatives within the City Council accused Rigotti of speculative interests in the definition of the plan. The dispute between the two sides was projected onto the two planners who were supposed to represent them. Consequently, also at a disciplinary level, the debate over the plan for Turin appeared as a confrontation between Rigotti and Astengo. This interpretation was partially true; for instance, the Piedmontese section of the INU – doubtless very close to Astengo, if not the expression of his own thought – accused the plan of being mere 'extension of the building ordinances' [55]. Nevertheless, the analysis of Rigotti's and Astengo's methodological statements and the ensemble of their quotations reveal how similar their cultural background and universe of references were.

Since all Astengo's proposals were rejected, it could appear senseless to compare his planning projects to those of Rigotti, from the point of view of their efficacy. Notwithstanding this, a comparison between Astengo's and Rigotti's theories could lead to some useful considerations on the theme of planning theory and reality. In both Astengo and Rigotti, in fact, the relationship between theory and practice often appears weak, and this was not simply due to the distance between debate and application that marked the Italian post-war town planning scene, where there were more theoretical than operative opportunities.

In Astengo's (and ABRR's) 1947 studies for the southern expansion of Turin, which were related both to the Regional Plan for Piedmont and the competition for the plan of Turin, his attitude towards planning implementation is evident [56]. Concerning himself with problems such as the distance between industry and homes, he referred to examples such as those of Ludwig Hilberseimer. At the same time he remained loyal to a notion of town planning wherein urban development and social advancement are correlated. Not surprisingly, Astengo referred to 'mythological' figures of town planning, such as Tony Garnier, who had been codified by historiographic tradition for his supposed social and political commitment [57].

With Rigotti the relationship between theory and practice appears more complex than with Astengo. In fact, as difficult as it is to find a direct relation between his town planning theory as propounded in the first of the two volumes of *Urbanistica* or the preliminary

methodological statements of the 1956 plan, it is still more difficult to relate the plan with the statements made in 1956 [58]. In fact, in the case of the Turin plan, Rigotti's town planning concept apparently involved three seemingly unrelated levels. First, town planning as the demonstration of text-book theory: a set of references forming a general portfolio, especially from a disciplinary point of view. Secondly, 'theory' as precursor to actual implementation of technical and political imperatives of town planning; that is, theory as merely a preliminary procedure in the planning process. Here, technical or methodological assertions legitimize the plan, both as an instrument of political consensus and a normative tool. Thirdly, the notion of the plan itself as theory, or theory into practice: something different from 'effective planning', or the city's transformation after the adoption of the plan [59].

This disconnectedness points to the fact that, despite the acknowledgement that confrontations between practice and professional interests were defined by technical parameters such as zoning, decentralization, road systems and standards accompanied by legal and normative procedures, these issues were often forgotten on a theoretical level by even the most committed architects. In this regard, it is of some interest to note that the word 'zoning' only appears once in Rigotti's two volumes of *Urbanistica* [60]. Notwithstanding this, zoning was the basic element determining Rigotti's plan of 1956, while urban density standards were the rules for its implementation [61] (Figs 9 and 10). In



Figure 9. G. Rigotti, plan for Turin, general zoning scheme, 1956 [from: *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 7 (1956)]. The plan of 1956 leaves the central zone almost completely untouched; it also confirms the presence of industry in the north and south-east areas and a mix of activities in other parts of the city; the road layout remains substantially that of the 1913 plan.

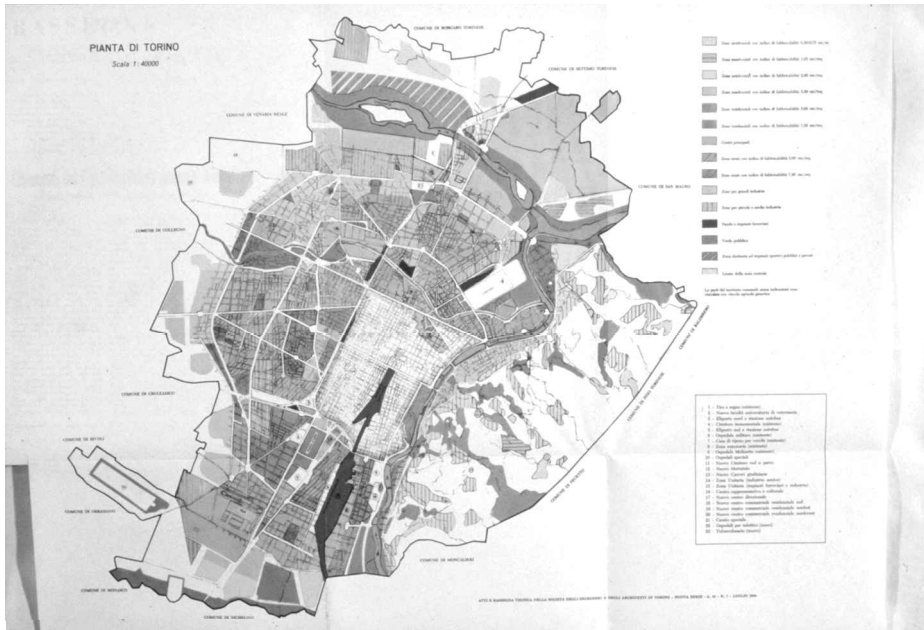


Figure 10. G. Rigotti, plan for Turin, zoning scheme for the residential areas, 1956 [from: *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino*, 7 (1956)]. In black are shown seven 'new urban centres': according to their specialization, they are divided into 'residential', 'cultural', 'directional', 'representative' and 'special'. Note the zoning hierarchy based on the density standard (number of inhabitants per hectare).

the same way, zoning and decentralization were two of the key words proposed in 1945 by Astengo's and the INU Regional Plan commission's studies, at the Milan Symposium for Building Reconstruction [62].

Astengo's and Rigotti's differences were facilitated by a shared professional vocabulary, and a common field of discussion: that of technique. Technique – intended as a set of parameters like zoning, decentralization, circulation, building standards and procedures became the subject of the debate, prior to political or ideological issues. The resolution of the apparent incompatibility between theory and practice was possible for both Rigotti and Astengo at the level of procedures. In a 1950 article, significantly entitled 'Teoria e pratica urbanistica' (Town planning theory and practice), Rigotti posed the problem of the division of ownership in the urban real estate market as an obstacle to 'town planning organization' [63]. Immediately rejecting the hypothesis of public ownership of land, Rigotti focused his attention on the problem of assessment of taxation on improved real estate value. What he seemed to propose was a kind of 'contractual strategy': a halt to building activities in some of the city's areas and a precautionary valuation of land values at the level of 'pre-existing conditions'. Interestingly enough, in the 1945 INU studies, Astengo proposed to set up a 'Regional Plan National Board' with an administrative section allotted the task of compiling an index of improved real estate taxpayers [64].

Conclusions

Although Rigotti and Astengo are often depicted as the key players in the debate over the implementation of the Turin plan of 1956 (approved by the Ministry of Public Works in 1959), they do not represent the full spectrum of the conflicts which divided Turin's politics and society in the post-war years. Through a high number of modifications, the plan was significantly changed in comparison with Rigotti's original draft. Rigotti's concern for a zoning system through residential and economic typologies was eroded by a multitude of partial plans and standards exemptions, notwithstanding the fact that the city had largely recovered from war damage. City Council differences went beyond the disciplinary debate and were also related to the problems of a city that, because of impressive immigration, grew from a population of 720 000 in 1951 to 1 025 000 in 1961 [65]. Nevertheless, the aim of this article was to focus on the plan's theoretical basis and on the town planning culture it expressed, rather than on its application. One of the goals was to point out the fact that the controversy between Rigotti and Astengo was facilitated by a shared professional vocabulary.

The polemical debate between Rigotti and Astengo also is instructive from another point of view. It signals not only a paradox in post World War II town planning but a problem which continues to confront planners today. For despite the ostensibly oppositional polemics, the debate remained ideological and never addressed what might be arguably the most significant problem in planning – the technical implementation of theory. In fact, in theory and practice, technique seemed to have been considered neutral for both Rigotti and Astengo. This sense of 'neutrality' of technique is indubitably common to the constitution of other 'technical' professions in contemporary society.

Finally, the debate over the plan for Turin also marks the degree of separation between planning as a set of normative tools and town planning as a frame of references or models. The differences over the adoption of the Plan for Turin, as discussed above, were characterized by an emphasis on more theoretical aspects of the discipline to the exclusion of practical ones. A final note can be added. Although this article has dealt principally with the question of plan implementation, it has intersected also an important historical and methodological question. It seems evident that the discussion of the disparity of positions held by Rigotti and Astengo belongs to a concept of the history of town planning as a history of techniques and ideas, rather than the history of town planning as urban history. This crucial distinction is too often over-looked among architecture and town-planning historians.

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Notes and references

1. A first announcement of the competition had been made on 30 October 1946. The competition was officially debated by the City Council on 22 December 1947, and the competition brief was announced on 2 January 1948. The competition deadline was initially 2 June 1948, but delayed to 30 August. Bando di concorso per un piano regolatore generale di massima. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 11 (1947) 317–8; Per il nuovo piano regolatore di Torino. La relazione della Commissione giudicatrice del Concorso. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 1 (1949) 3–16; *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino*, 7 (1956).
2. The theme of the pre- and post-war continuity in the state's apparatus is today one of the most debated by contemporary historians. On the role of the United States see: D. Ellwood, *Rebuilding Europe. Western Europe, America and Postwar Reconstruction 1945–1955*, London-New York: Longman, 1992, pp. 28–40. By the same author, see also: *Italy, 1943–1945*, New York-Leicester: Holmes and Meier-Leicester University Press, 1985.
3. Per il nuovo piano regolatore di Torino. La relazione della Commissione giudicatrice del Concorso. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 1 (1949) 3–16.
4. A good account of the various positions taken in Italian architecture and planning during Fascism is: G. Ciucci, *Gli Architetti e il Fascismo. Architettura e Città 1922–1944*, Torino: Einaudi, 1989.
5. G. Zucconi, *La Città Contesa. Dagli Ingegneri Sanitari agli Urbanisti (1885–1942)*, Milano: Jaca Book, 1989, pp. 182–6.
6. Astengo urged the acceptance of the plan for the spring of 1948, suggesting that 'To renounce [...] that goal means to renounce *a priori* to plan building activity for the next year; it means to permit a chaotic start of the building activity'. These words were to appear prophetic: G. Astengo, Il piano regolatore di Torino *Metron* 13 (1947) 56–60. All translations in this article are by the author.
7. The complete list of the members of the selection committee is: Giulio Casalini (president), Arturo Midana, Piero Bottoni, Giovanni Chevalley, Cesare Chiodi, Ettore Coccino, Gian Domenico Cosmo, Danilo Giorsetti, Giovanni Muzio, Adriano Olivetti, Andrea Quaglia, Natale Reviglio, Enrico Sartorio. Prossimo Concorso per il piano regolatore di Torino. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 2 (1947) 50.
8. The authors of the projects were: Luigi Dodi, Mario Morini, Giampiero Vigliano; Giorgio Rigotti; Aldo Putelli, Ezio Cerutti, Giuseppe Merlo, Alberto Morone, Fausto Natoli; Alessandro Molli Boffa, Cesare Perelli; Giovanni Astengo, Nello Renacco, Aldo Rizzotti; Eugenio Gentili, Anna Castelli Ferrieri, Ignazio Gardella, Gabriele Mucchi, Mario Tevarotto, Marco Zanuso, Andrea Ferro, Enrico Provenzale; Franco Albini, Giovanni Astengo, Nello Renacco, Aldo Rizzotti, Ettore Sottsass; Gabriele Manfredi, Emilio Decker, Giuseppe Canestri, Alberto Ressa: although the competition brief did not limit participation solely to national designers, no foreign architect was represented as the probable consequence of an inadequate and short-range advertisement campaign. Per il nuovo piano regolatore di Torino. La relazione della Commissione giudicatrice del Concorso. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 1 (1949) 3–16; Il piano regolatore della città di Torino. *Comunità* 1 (1949) 28–9; Concorso per il piano regolatore della Città di Torino. Progetto degli Architetti E. Gentili, A. Castelli, G. Mucchi, M. Tevarotto and M. Zanuso. *Comunità* 1 (1949) 30–3; Concorso per il piano regolatore di Torino. *Urbanistica* 1 (1949) 32–55.
9. Per il nuovo piano regolatore di Torino. La relazione della Commissione giudicatrice del

- Concorso. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 1 (1949) 3–16; Concorso per il piano regolatore di Torino. *Urbanistica* 1 (1949) 44–5.
10. *Metron* 14 (1947). The plan was presented immediately after to the Italian public as a book, published by Sandron, who also published *Metron*. G. Astengo, M. Bianco, N. Renacco and A. Rizzotti, *Il Piano Regionale Piemontese*. Roma: Sandron, 1947. For the Regional Plan for Piedmont see also: C. Mazzoleni, Fondazione di un metodo positivo della pianificazione: dal Piano regionale piemontese ai 'Criteri', in F. Indovina (ed.) *La Ragione del Piano. Giovanni Astengo e l'Urbanistica Italiana*. Milano: FrancoAngeli, 1991, pp. 35–70.
 11. Relazione dell'Istituto Nazionale di Urbanistica a cura della Commissione per lo Studio dei Problemi del piano regionale, in *Rassegna del Primo Convegno Nazionale per la Ricostruzione Edilizia*. Milano: Officina Grafica F.lli Marinoni, 1945, pp. 30–9; the text did not contain information on the Piedmont plan but was a general report on regional plans in Italy. I am grateful to Luca Molinari for providing me with information about the role of Peressutti in the Symposium organization.
 12. *Metron* 14 (1947); Arteria di attraversamento Nord-Sud di Torino. Progetto Astengo, Bianco, Renacco, Rizzotti. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 8 (1947) 236–41; E. Serra, Un asse per la metropoli. La rifondazione dell'urbanistica italiana nel dopoguerra. *Controspazio* 6 (1991) 54–60.
 13. On this subject, see Astengo's memories in the last years of his life: G. Astengo, Qualche 'mia' idea di città, in F. Indovina (ed.) *La Ragione del Piano. Giovanni Astengo e l'Urbanistica Italiana*. Milano: FrancoAngeli, 1991, pp. 257–60.
 14. During these years, projects for decentralization prepared by the Genio Civile, the national Corps of civil engineers, were frequently reported by *La Stampa*, Turin's most important newspaper.
 15. Some information on Rigotti's work and academic career is taken from the *curriculum vitæ* he submitted to the national competition for a teaching post at the Naples University, 1964: the typescript is available at the Biblioteca Centrale di Architettura, Politecnico di Torino.
 16. G. Rigotti, *Urbanistica. La Tecnica*. Torino: UTET, 1947; *ibid.*, *Urbanistica. La Composizione*, Torino. UTET, 1952; the two books had a Spanish translation.
 17. P. Di Biagi, Giovanni Astengo. Un metodo per dare rigore scientifico e morale all'urbanistica, in P. Di Biagi and P. Gabellini (eds) *Urbanisti Italiani. Piccinato Marconi Samonà Quaroni De Carlo Astengo Campos Venuti*. Roma-Bari: Laterza, 1992, pp. 395–447: this essay contains a complete report on Astengo's biography and bibliography. See also: 3° *Premio Nazionale Olivetti di Architettura e di Urbanistica*. Ivrea: Ing. C. Olivetti e C. S.p.A., (1958).
 18. Astengo, Qualche 'mia' idea di città, *loc. cit.* On Piccinato see: C. De Sessa, *Luigi Piccinato, Architetto*. Bari: Dedalo, 1985; F. Malusardi, *Luigi Piccinato e l'Urbanistica Moderna*. Roma: Officina, 1993.
 19. G. Becker, Mostra internazionale di edilizia di Torino. *Metron* 13 (1947) 61–6. The section was organized by Ettore Sottsass.
 20. On the political and cultural issues of Olivetti and the 'Movimento di Comunità' see: P. Bonifazio, Territorio e partecipazione: la proposta dell'*humana civitas* di 'Comunità'. *Storia Urbana* 66 (1994) 5–26.
 21. Di Biagi, Giovanni Astengo. Un metodo per dare rigore scientifico e morale all'urbanistica; C. Olmo, *Urbanistica e Società Civile. Esperienza e Conoscenza, 1945–1960*. Torino: Bollati Boringhieri, 1992. Olivetti, main sponsor of *Urbanistica*, was the INU director from 1952 to 1960.
 22. The presentation of the plan was held in Rome, 1936: *Piano Regolatore di Valle d'Aosta*. Ivrea: (Ing. C. Olivetti e C. S.A.), 1937; studies went on in the following years and were resumed in a 1943 publication organized by Renato Zveterevich: *Studi e Proposte Preliminari per il Piano Regolatore della Valle d'Aosta*. Ivrea: Nuove Edizioni Ivrea, 1943.

23. Le Corbusier, *La Charte d'Athènes*. Paris: Plon, 1943. Giorgio Ciucci has pointed out the discrepancy between the Athens Charter-like surveys and the proposals put forward by the architects: Ciucci, *Gli Architetti e il Fascismo*, *op. cit.* [4], pp. 169–74.
24. Paola Di Biagi writes about Astengo's 'methodology to give town planning scientific and moral rigor'. Di Biagi, Giovanni Astengo. Un metodo per dare rigore scientifico e morale all'urbanistica, *loc. cit.*
25. G. Astengo, Attualità dell'urbanistica. *Urbanistica* 1 (1949) 3–5.
26. L. Mazza, Giovanni Astengo. A memorial note. *Town Planning Review* 62 (1991) 107–8.
27. The committee did not award the first prize but premiated six projects and allotted reimbursements to another three; among the premiated projects were the two by Astengo and Rigotti's plan.
28. L. Mazza, Trasformazioni del piano, in L. Mazza and C. Olmo (eds) *Architettura e Urbanistica a Torino 1945/1990*. Torino: Allemandi, 1991, pp. 61–85.
29. Rigotti, *Urbanistica. La tecnica*, *op.cit.* [16].
30. *Ibid.*, p. vi.
31. *Metron* 14 (1947).
32. C. Olmo, Torino da città capitale a città industriale. *Studi Storici* 1/2 (1983) 217–35; C. Olmo and R. Curto, La città tra mercato e industrializzazione: il caso di Torino. *Passato e Presente* 5 (1984) 27–56; Zucconi, *La Città Contesa*, *loc. cit.*, pp. 45–7.
33. F. Mauro, *L'Ubicazione degli Impianti Industriali*. Roma: ENIOS, 1936; *ibid.*, *Industrie e Ubicazioni. Principi e Problemi Generali*. Milano: Hoepli, 1944; *Ibid.*, *Industrie e Ubicazioni. Particolari Requisiti di Efficienza*. Milano: Hoepli, 1945; *Ibid.*, *Teratismi nell'Industria. Anomalie e Squilibri*. Milano: Hoepli, 1947. Mauro's writings are also quoted in: *I Piani Regionali. Criteri di Indirizzo per lo Studio dei Piani Territoriali di Coordinamento in Italia*. Roma: Ministero dei Lavori Pubblici, 1953, Vol. II; Astengo was the chairman of the study committee of the Inter-ministerial commission for the Territorial Plans of Co-ordination.
34. On Mauro see: A. Salsano, L'americanismo di un ingegnere. Il viaggio di Francesco Mauro negli Stati Uniti nel 1927. *Le Culture della Tecnica* 2 (1995) 7–22; *Ibid.*, Fortuna dell'organizzazione scientifica del lavoro in Italia. *Le Culture della Tecnica* 2 (1996) 5–24. Both Mauro and Olivetti travelled during the 1920s to the United States and reported on *L'Organizzazione Scientifica del Lavoro*.
35. F. Mauro, Il piano regionale della Valle d'Aosta. *L'Organizzazione Scientifica del Lavoro* 9 (1935) 365–8.
36. The *Notebook* is the number 22, devoted to Americanism and Fordism. For the English reader I refer to Q. Hoare and G.N. Smith (eds) *Selections from the Prison Notebooks of Antonio Gramsci*. New York: International Publishers, 1971, pp. 279–318.
37. In Luigi Mazza's words: Mazza, *Trasformazioni del piano*, *op. cit.* [28].
38. G. Rigotti, Studi in corso per il nuovo Piano regolatore di Torino. *Urbanistica* 15–16 (1955) 118–24.
39. G. Astengo and M. Bianco, Sul soleggiamento degli edifici di abitazione. *Metron* 9 (1946) 17–25. Gropius writing quoted in this article is: W. Gropius, Flach-, Mittel-, oder Hochbau?, in CIAM (ed.) *Rationelle Bebauungsweisen. Ergebnisse des 3. Internationalen Kongresses für Neues Bauen (Brüssel, November 1930)*. Stuttgart: Julius Hoffman Verlag, 1931, pp. 26–47.
40. ASCORAL, *Les Trois Établissements Humains*. Boulogne: Éd. l'Architecture d'Aujourd'hui, 1945; Le Corbusier, *Œuvre complète 1938–46*. Zurich: Les Éditions d'Architecture Erlenbach, 1946; *Ibid.*, Piano urbanistico per Saint-Dié, *Metron* 6 (1946) 45–52.
41. *Algemeen Uitbreidingsplan van Amsterdam*. Grondslagen voor de Stedebouwkundige Ontwikkeling van Amsterdam, Amsterdam: Stadsdrukkerij Amsterdam, (1934). G. Astengo, La lezione urbanistica di Amsterdam. Formazione storica e nuovi ampliamenti. *Urbanistica* 2 (1949) 27–42.

- In this long report, Astengo referred to his visit to the Dutch city: he mentions Cornelis Van Eesteren as the head of the bureau for the execution of Amsterdam partial plans.
42. Giedion's accusations are in: S. Giedion, *Space, Time and Architecture: the Growth of a New Tradition*. Cambridge (Mass.): Harvard University Press, 1941. It is interesting to point out the fact that Astengo quoted the original English version of the book, as the successful Italian translation appeared in 1954 only.
 43. G. Astengo, Piano di coordinamento territoriale, in *Enciclopedia Italiana*. Roma: Istituto della Enciclopedia Italiana, 1949, pp. 544–5; D. Lilienthal, *TVA: Democracy on the March*. New York: Harper and Brothers Publishers, 1944; C. Bettelheim, *La Planification Soviétique*. Paris: Librairie des Sciences Politiques et Sociales Rivière, 1945. Paola Di Biagi emphasizes also Astengo's attention to the Polish post-war town planning scene: Di Biagi, Giovanni Astengo. Un metodo per dare rigore scientifico e morale all'urbanistica, cit.
 44. Astengo referred to Mumford in: Astengo, Attualità dell'urbanistica. *Urbanistica* 1 (1949) 3–5. The 'Edizioni di Comunità' translated Gutkind's *The Expanding Environment* (1955), *Architecture and Society* (1958), *Community and Environment* (1960) and Mumford's *The Culture of Cities* (1953), *The Condition of Man* (1957), *In the Name of Sanity* (1959), *Art and Technics* (1961), *The City in History* (1963); in any case, *The Culture of Cities* was object of a large circulation long before the Italian translation. Lilienthal and Bettelheim's books were translated in Italian in 1946 and 1949, the last by the 'Edizioni di Comunità'.
 45. G. Rigotti, *Urbanistica di Guerra? No ... Urbanistica di Pace. La Città Solare Isocrona*. Torino: Rattero, 1944.
 46. Le Corbusier, *Des Canons? Des Munitions? Merci, des logis* S.V.P. Boulogne: Éd. l'Architecture d'Aujourd'hui, 1938; *Ibid.*, *Sur les Quatres Routes*. Paris: Gallimard, 1941.
 47. P. Betta, Problemi storico-urbanistici della Città di Torino. *Torino. Rassegna Mensile Municipale* 6 (1930) 467–91.
 48. Rigotti, *Urbanistica di Guerra? No ... Urbanistica di Pace*, loc. cit. In the book, Rigotti did not refer directly to Turin. The city under study remains anonymous, due to 'evident contingent reasons'.
 49. P. Abercrombie and J. C. Forshaw, *County of London Plan. Prepared for the London County Council*. London: Macmillan and Co., 1943.
 50. G. Astengo, Piano di coordinamento territoriale, in *Enciclopedia Italiana*. Roma: Istituto della Enciclopedia Italiana, 1949, pp. 544–5; *Ibid.*, Attualità dell'urbanistica. *Urbanistica* 1 (1949) 3–5.
 51. G. Piccinato, Il piano di Abercrombie e i sogni dell'urbanistica italiana, in F. Ventura (ed.) *Alle Radici della Città Contemporanea. Il Pensiero di Lewis Mumford*. Milano: CittàStudi, 1997, pp. 221–9.
 52. Rigotti, *Urbanistica di Guerra? No ... Urbanistica di Pace*, loc. cit. The plan had been presented in a 1944 *Urbanistica* issue (the article was based on data 'kindly provided by the architect Bruno Zevi'): Un esempio di urbanistica organica: il piano regolatore per la ricostruzione di Londra. *Urbanistica* 3–6 (1944) 31–42. See also Piccinato, Il piano di Abercrombie e i sogni dell'urbanistica italiana, loc. cit. Anthony Sutcliffe drew my attention to the fact that copies of the Abercrombie and Forshaw book entered the Axis countries via the Swedish embassy in Hamburg.
 53. P. Hall, Bringing Abercrombie back from the shades: a look forward and back. *Town Planning Review* 3 (1995) 232.
 54. M. Tafuri, 'Machine et mémoire'. La città nell'opera di Le Corbusier. *Casabella* 502–503 (1984) 44–51.
 55. Polemics between Rigotti and Astengo are summarised in: Mazza, Trasformazioni del piano, loc. cit. See also: G. Astengo, Torino senza Piano. *Urbanistica* 15–16 (1955) 110–7; Rigotti, Studi in

- corso per il nuovo Piano regolatore di Torino, 15–16 *loc. cit.*; *Ibid.*, Gli orientamenti per il piano generale di Torino. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 4 (1955) 138–45; Osservazioni al Piano Regolatore di Torino fatte dall'Istituto Nazionale di Urbanistica, Sezione Piemontese. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 3 (1957) 116–20; G. Rigotti, In margine al Convegno dell'I.N.U. a Lucca. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 2 (1957) 559–60.
56. G. Astengo, Cenni orientativi sull'espansione Sud di Torino. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 4 (1947) 103–4.
 57. Tony Garnier's *Cité industrielle* is, in Astengo's words, '[...] valid for the evident will to renovate and the clear consciousness for a new civilization of work': G. Astengo, Crisi ed avvenire delle città europee. *Architettura Italiana* 7–8–9 (1942) 7–11. Interestingly enough, Astengo re-iterated these judgements in more recent writings: Astengo, Qualche 'mia' idea di città, *loc. cit.* On Garnier's 'fortune' among planners, architects and critics, see: P. Scrivano, Tony Garnier e i Grands travaux lionesi (1906–1935). Un'ipotesi di lettura. *Controspazio* 2 (1993) 54–9; *Ibid.*, Urbanistica e costruzione della città in un caso storico: Tony Garnier e Lione. *Storia Urbana* 65 (1993) 171–91.
 58. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 7 (1956); *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 3 (1960); *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 4 (1960).
 59. I briefly put forward this interpretation in: P. Scrivano, Torino, in F. Dal Co (ed.) *Storia dell'Architettura Italiana. Il Secondo Novecento*. Milano: Electa, 1997, pp. 104–21.
 60. Rigotti, *Urbanistica. La tecnica*, *loc. cit.*
 61. G. Rigotti, Studi in corso per il nuovo Piano regolatore di Torino. *Urbanistica* 15–16 (1955) 118–24; *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 7 (1956).
 62. Relazione dell'Istituto Nazionale di Urbanistica a cura della Commissione per lo Studio dei Problemi del piano regionale.
 63. Relazione dell'Istituto Nazionale di Urbanistica a cura della Commissione per lo Studio dei Problemi del piano regionale, in *Rassegna del Primo Convegno Nazionale per la Ricostruzione Edilizia*, *loc. cit.*; G. Rigotti, Teoria e pratica urbanistica. *Atti e Rassegna Tecnica della Società degli Ingegneri e degli Architetti in Torino* 6–7 (1950) 91–4: this is the text of Rigotti's participation in the 3rd National Congress of Town Planning in Rome.
 64. Relazione dell'Istituto Nazionale di Urbanistica a cura della Commissione per lo Studio dei Problemi del piano regionale.
 65. Researches on the relationship between society, politics and planning in post-war Turin are currently in progress: I wish to thank Daniela Adorni, Paolo Soddu and Elisabetta Serra for providing me information on their works.