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'Aeroimages' and Urban Visions of Rome between the Wars

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Abstract

At the beginning of the last century, the experience of flying by airplane favoured the development of a new sensitivity towards the city and the territory. It transcends the static visions of the hot-air balloon and introduces a dynamic and, in some ways, anti-perspective sense, even in the urban representation. This article focuses on the twenty years of fascism and the case of Rome, which the historical events made the main development centre for the new-born aeronautics; investigates the relationship between the work of futurist artists, who created new figurative methods in aeropittura (aeropainting), and that of architects, increasingly committed to providing bird's-eye views of large urban projects; identifies in some architects and drawings the signs of a new way of representing the city and of interpreting architecture from above, in connection with the surrounding territory, which testify to the airplane experience both directly and mediated by photography and cinema; finally, it witnesses the resistance of conventional architectural graphic models and the architects' general inability to grasp the suggestions offered by the artists.

Keywords: Futurism, aeropittura, bird's-eye view, photography, urban design.

Introduction

At the end of the 18th-century, the Montgolfier brothers' balloon finally permitted the human levitation and the observation and representation of cities from above, which was before entrusted to the artists' imagination and geometric expertise. A century later, the construction of the early flying machines offers pilots the thrill of flight and a dynamic perception of the urban form, actualising the literary and figurative imagery from learus to science fiction. The experience of flight, which is intertwined with war events, the futurist exaltation for speed and the rise of fascism, has its historical focus in Rome and is concretely manifested in the so-called 'aeropainting'; parallel to this, indications of a novel way of seeing and picturing the city from above also timidly appear in the architectural and urban design. On the

centenary of the military aeronautics, this article proposes a critical rereading of the project drawings relating to the Roman territory in the decades between the two wars, aimed at measuring the signs of this experience in relation to their geometric-perspectival (visual field, point of view, position of the picture plane, etc.) and graphical contents (level of detail, chiaroscuro, shadows, etc.) as well as the topics covered.

Aero-Rome, Aeropainting

From the early 20th century, Rome has been the main centre of research on flight. The *Cantiere Sperimentale Aeronautico*, where the Italian airships were tested and the



Fig. 1. Nadiral photo of the centre of Vienna taken during the launch of Gabriele D'Annunzio's flyers. Author: A. Locatelli, 1918: https://commons.wikimedia.org/wiki/File:Manifesti_su_Vienna.jpg (accessed May 3, 2023).

first seaplanes were built, was installed in Vigna di Valle in 1904. In April 1909, the American aviator Wilburn Wright gave flight demonstrations at the Centocelle field, effectively training the pioneers of Italian military aeronautics. Actualy, since the first balloon flight in 1783, first the view from above and then the aerial photography mostly fulfilled cartographic and military tasks [1]. Alfred Guesdon's views of Italian cities from the balloon, aided by early daguerreotypes and published in the mid-19thcentury, are only an exception [2]. From 1899 on, the archaeologist Giacomo Boni, assisted by the Military Engineers, had been using a hot air balloon to survey the valley of the Forum and plan the excavations of the imperial palaces [Castrianni, Cella 2009a]. These experiences, with an exquisitely technical and military implication, also affected the imagination of the artists [Boffito 1921; Lodi 1981] as Villa Mellini's frescos testify [Castrianni, Cella 2009b]. The futurist incitement to the speed of airplanes finds its ideal founding act in Le monoplan du Pape, a novel written by Filippo Tommaso Marinetti in 1911 and published during the Italo-Turkish war in Libya, where the early military airplanes were involved. The Manifesto of Futurist Architecture of 1914 is ideally illustrated by Antonio Sant'Elia with visionary urban structures seen from above that integrate immense airstrips.

The topic of human flight, associated with the myth of Icarus and the inventions of Leonardo da Vinci, is intertwined with the nationalist impulses devoted first to interventionism and then to peace. The disruptive political value of the airplane was unleashed by Gabriele D'Annunzio's 'crazy flight' over Vienna on August 9, 1918, which marked an historic watershed. The nadiral photographs of the Austrian city are exalted by the press and convey an unprecedented sense of domination to the Italians (fig. 1). The episode gives flight a universal and lyrical dimension that fascinates an entire generation. The flight which, as Walter Benjamin would write [2001, p. 413], "has pierced the monopoly of the vertical", changes the way of framing and representing the city by virtue not only of the variation of the point of view and of the optical axis but also of the deformation imposed by the speed. This is already perceived in the Edificio visto da un aeroplano virante that Virgilio Marchi, architect and set designer, painted in 1919 [3] (fig. 2). When fascism came to power in 1922, the Capitoline administration had already transformed Centocelle into the first Italian airport, created an airport in Guidonia (1916), and set up a seaplane base in Ostia (1919), whose hall was decorated with wall paintings that graphically interpret the flight experience by Gerardo Dottori in 1926 (fig. 3). In the same year, Fedele Azari created Prospettive di volo, the first painting attributable to the so-called 'aeropainting'. His work suggests the possibility of including movement in the representation not only of the human body, as Boccioni had already experimented by materializing the trails, but also of the landscape. The Manifesto dell'Aeropittura [4] of 1929 claims that "the changing perspectives of flight constitute an absolutely new reality and that it has nothing in common with the reality traditionally constituted by terrestrial perspectives" [Mostra Futurista 1932, p. 6]. These experiences subvert the cornerstones of traditional projective representation and orient the visual framework according to unexplored positions. Eventually, they attribute an unprecedented centrality to the roofs of buildings, which become the fifth facade' in the definition attributed to Le Corbusier [Asendorf 1990].

The diffusion of airplanes –but also the airship is a frequent presence in the sky of Rome– stimulates the proposal of new urban models able to favour air traffic at all scales. In the unpublished *I vertici azzurri di Roma* (1924-1926), Virgilio Marchi illustrates the opportunities to develop an 'upper city' for air traffic [Godoli, Giacomelli 1995] while an artist-architects such as Tullio Crali [1994] designs not only a Aeroporto urbano (1931) but also a Ristorante aereo. At the same time, the new figurative approach, which breaks down the surface of the canvas with trajectories, kinematic lines and nuanced trails intertwines with the regime's needs for self-representation.

By shaping the capital as a stage for its political action, the fascist party also makes use of the collective imagination linked to flight, by virtue of the civil enterprises of Italo Balbo and the military ones of Ettore Muti [5]. It is no coincidence that the Duce's face is projected onto the view of the newly erected via dell'Impero in Alfredo Gauro Ambrosi's [6] Aeroritratto di Mussolini aviatore (1930) (fig. 4). The aeronautics and military aircraft become protagonists as an object and a subject in cinema and architecture, too [7]. In the days in which "the monumental Italian Air Force Exhibition, set up in Milan in 1934, seals in inescapably modern aesthetic ways the first epic ten years of the most modern weapon of the new regime" [Fiorino et al. 2017, p. 508, translated by authors], the inauguration of Sabaudia on April 15, 1934 is celebrated by the flight of a flock of fighters. The photographs taken by the pilots become the official representation of the new milestone achieved by the fascist regime and help Tato paint Sorvolando Sabaudia according to the canons of aeropainting. Also in 1934, the Manifesto Futurista dell'Architettura Aerea, published by Angiolo Mazzoni and Mino Somenzi [8], renews the partnership between architecture and futurism under Marinetti's blessing: "the real 'important factor' of this manifesto is Aviation, which make prefiguring 'new social, political, industrial, commercial scenarios' and admiring 'the single great City with continuous lines to be admired in flight possible. [...] Flying at night with the suns extinguished, we will have them below us like brilliant starry milky ways from the guiet explosion of the fulgent letters of this word, long from the Alps to Mogadishu: ITALIA" [Mangione 2008, pp. 20, 21, translated by authors].

Rome from above

The effects of flight on the urban representation can be read by focusing on Rome. The Eternal city has been the subject of countless views from above [9] also due to its bumpy morphology. Beyond the empirical ancient and medieval representations produced for symbolic and touristic purposes [Wataghin Cantino 1969], the prototype of the bird's-eye view is established by Étienne Dupérac in 1572.



Fig. 2. Building seen from a turning plane. Author: V. Marchi, 1919: <https:// thecharnelhouse.org/2014/06/13/a-century-since-futurism-antonio-santeliaand-mario-chiattone/virgilio-marchi-building-seen-from-a-veering-airplaneedificio-visto-da-un-aeroplano-virante-1919-20-tempera-on-canvased-paper-130-x-145-cm-private-collection-switzerland/> (accessed May 3, 2023).

Fig. 3. Decoration sketch for the waiting room of the airport of Ostia. Author: G. Dottori, 1927 [Scudiero, Cirulli, Alegi 2003, p. 221].



Fig. 4. Aeroportrait of Mussolini the aviator. Author: A. G. Ambrosi, 1930: <https://it.wikipedia.org/wiki/Alfredo_Ambrosi#:~:text=Alfredo%20Ambrosi%20(Roma%2C%201901%20%E2%80%93,vista%20di%20Roma%20 del%201930> (accessed May 3, 2023).

The perspective view of Michelangelo's project of the Campidoglio (fig. 5), is presumed to have been conceived to institute a visual and symbolic relationship with the antiquities of the Forums [Colonnese 2018]. At the same time, it resembles the coeval landscape painting, which used an elevated point of view to show the design of the parterres on the ground and the extension of the held.

The graphic production of Dupérac and Jacques Lemercier, his ideal follower, features the role wood and paper models had in negotiating this type of representations, which later evolved into 17th century urban views [Martinez Mindeguia 2016]. Like

the relationship between the architect and the scale model, they can evoke the idea of power as 'superiority' emphasised by the revealing agency of the view from above. However, only after the hot-air balloon, the bird's-eye views began to support urban planning in the great European capitals; still in the Fascist era, the development of Florence was guided by the aerial panoramic view drawn by Luigi Zumkeller in 1936 [Corsani 2010].

These brief observations suggest that also the experience of flying by plane might have had visible effects in the way of representing architecture and the city. Though the consequences on futurist artists are evident, what about the architects? While Zumkeller's view, which was built as a real survey from the sky, "gives us the sense of astonished fixity of a view from a motionless hot-air balloon" [Gobbi 1982, p. 21, translated by authors], is there any desig representation embodying the view from the plane?

The aerial representations of Roman urban projects from the early 20th century show a broad visual cone and a generally static effect. This is the case of Guglielmo Calderini's [Boco 1996] drawing for the new Piazza d'Armi district (1908) and the International Exhibition of Arts at Valle Giulia (1911). Something different can be perceived in the views of Armando Brasini for his *Urbe Massima* (1914-1917). While the *Veduta dall'alto* of the immense monumental avenue still follows the rhetoric of historical views, with an impossible panoramic terrace in the foreground, the frayed edges of the *Planimetria* recall a frame of clouds (fig. 6). The project for the future via della Conciliazione is instead expressly depicted by a *Prospettiva aerea*, where the monumental scroll hides the panoramic terrace and any link with the ground.

Compared to Brasini's work, the bird's-eye perspective of Marcello Piacentini's study for the new Foro Littorio (1926), aligned to the main axis, looks rather didactic and debtor to Dupérac's 16th-century model. Beyond the clouds that mediate the relationship between the city and the horizon, Brasini's drawings show instead an 'accidental' vision of the monumental avenue that can be interpreted as an affiliation to new aesthetic models influenced by the flight. This also occurs in the close-up visions of his interventions in the historic centre, where a single visual cone embraces the monuments of the First and Third Rome favouring no urban axis [10], and in the Imperial Forums project by La Burbera group (1929), where the chiaroscuro component, due to the presence of Vincenzo Fasolo and Alessandro Limongelli, dramatises the image. Anyway, to find a true 'aeronautical' view, one has to turn to the Italian-Hungarian Jenô/Eugenio Faludi [11], the leader of the Gruppo Urbanisti Romani. His airport design for Rome, which was presented at the IV Congresso internazionale di navigazione aerea (Rome, 24-30 October 1927) and then at the 1st Italian Exhibition of Rational Architecture in 1928 [Cennamo 1973, figs. 41-48], is properly depicted in a perspective view framed by the wings of a flying biplane.

Photography and cinema play a central role in changing the architects' gaze towards the city, even in views from above, often used to evaluate the relationship with the monuments. For example, the architects who illustrated the proposals for the Palazzo del Littorio in 1934 are likely to have watched the sequence in subjective of the planes that shot King Kong down the Empire State Building, released in Italy in October 1933. Surely, some of the entries show the use of mixed techniques including photo montages.

Giuseppe Terragni [12], Marcello Nizzoli and Luigi Vietti pasted a photographic excerpt of an exalted crowd below the concave facade of project 'A' seen from above. Luigi Figini and Gino Pollini, together with BBPR and Arturo Danusso, cut out the silhouettes of the military fighters flown over Sabaudia a few months before and glued them onto the photograph of their model shot from above (fig. 7). Filling the skies of architectural drawings -- and the apse of churches, too [13]- with balloons and airplanes conveys the 'brand' of the regime and a general idea of modernity and dynamism. The case of Figini and Pollini, in addition, refers to an effective event and point of view which attributes further likelihood to the model. The photographs of the models – and the material cut from the photographs often taken with an inclined axis- are perhaps the only occasions in which the design representation abandons the reassuring and 'academic' vertical picture plane and embraces the oblique axis vision of the pilot. In this sense, they are also the main occasions in which the design images find a point of contact with the 'extreme' perspectives of the 'aeropainter' Tullio Crali and the images of the futurist city by Virgilio Marchi and Quirino di Giorgio [Fillia 1931].



Axonometry vs Landscape

The introduction of axonometric views into the architects' graphic repertoire at the end of the 1920s is promoted by the illustration of historical typologies and small-scale projects. the former inspired by Auguste Choisy's drawings

Fig. 5. View of the Campidoglio designed by Michelangelo. Author: É. Dupérac, 1569: https://www.metmuseum.org/art/collection/search/395099 (accessed May 3, 2023).

Fig. 6. "Veduta dall'alto" and "Planimetria" for the "Urbe Massima" in the Flaminia Area, Author: A. Brasini, 1914-1917 [Brasini 1979, figs. 17 and 19].



Fig. 7. Palazzo del Littorio, photomontage. Author: Figini, Pollini, BBPR, Danusso, 1934 [Gregotti, Marzari 1997, p. 114].

on the Histoire de l'architecture (1899), the latter by the projects of the Central European avant-gardes. In Rome, Gustavo Giovannoni and Vincenzo Fasolo associate the historical analysis with the design investigation. While the history of architecture taught by Fasolo was "made to make architecture" [Tafuri 1994, p. 10], Marcello Piacentini's Architettura d'oggi provided the 1930s students and professionals with "a new rich figurative baggage of international projects" [D'Abate 2018, p. 94] out of the academic canon. In this sense, Ludovico Quaroni, still a fourth-year student, designs a high school in via Lisbon which is inspired by Le Corbusier and the Bauhaus and represents it with a military axonometric view from above (fig. 8). It seems designed to underline the new centrality of the 'fifth façade', which appears in true form, also through the chromatic treatment, which evokes the 'aeronautical' Planiti designed by Kazimir Malevič a few years earlier.

The axonometric design is tailored according to the purpose, of course. The wire-frame inked axonometric view of the Città universitaria di Roma (1932), within Marcello Piacentini's general project, renounces showing any aesthetic value to offer an objective reading of the volumes and reveal its internal space. Giuseppe Nicolosi's opaque axonometric views for Guidonia find a inspiration in the views of the numerous airplanes that fly over the new town. From the operative approach, axonometry spares the problem of foreshortening the city towards the horizon, while metaphorically it evokes the point of view of a distant creator, who could be identified with the duce; on the other hand, the horizon line not only symbolises the existential feature of perspective but also the expansion of the city to the territory. It is no coincidence that the university campus shows a greater visual impact in the photographs from above in which the complex relationships



Fig. 8. High school project for the Parioli district (via Lisbona) in Rome. Author: L. Quaroni, 1931-1932: < https://siusa.archivi.beniculturali.it/cgi-bin/siusa/pagina.pl> (accessed May 3, 2023).



Fig. 9. Junction along via Imperiale by the current piazza dei Navigatori. Author: M. Piacentini and collaborators, 1939 [L'urbe di Mussolini 1939, p. 25]

with the existing urban landscape emerge that justify its nickname of 'city'.

The territorial dimension emerges from the drawings for the expansion area along the current via Cristoforo Colombo to the E42, such as the sketches by Mario Ridolfi's group for the Ministry of East Africa (1937-1939), which seek both a visual and spiritual with the presence of classical Rome and natural morphology. Along the same line, the drawings by young architects [14] –including Baccin and Vagnetti- gravitating around Piacentini illustrate the main junctions of the via Imperiale, planned in collaboration with the Governorate of Rome. In particular, the circular solution for the second square (now Piazza dei Navigatori) shows debts to the aesthetics of aeropainting (fig. 9). Compared to the other drawings, the graphic licenses on details and shadows and the use of cars and trails give the bird's-eye view ambiguity and artistry and simulate the unstable and suggestive vision of an architectural vortex. Equally suggestive is the perspective from the Aurelian Walls towards the E42, demonstrating the intent to trace a territorial sign to be perceived in flight.

Planning the extension of the E42 area required plenty of different representations from the sky, from technical and operational to suggestive and communicative. For example, the central bird's-eye view along the main axis, actually referring to the early modernist ideas of Giuseppe Pagano, Ettore Rossi, Luigi Vietti and Luigi Piccinato, is strikingly different than the images that display the following and final development of the district, like a large tempera-painted panel showing a sort of zenithal view of the district in the territory (fig. 11). It is actually a military axonometric view with an oblique vertical axe. This curious solution negotiates between the importance to show the three-dimensional form of buildings in both a scientific and clear way and the priority to have the main avenue vertical and parallel to the panel frame, eventually recalling a view from a turning plane. The vivid colours and the shadows add a photo-realistic and picturesque dimension to the project, which is distant from the abstraction and whiteness of the actual buildings. Together with the E42, the fascist regime reached the apex of the architectural representation in its northern counterpoint, the Foro Mussolini, also elevated to the role of monumental gateway to the Terza Roma. In this case, the vision from above embodying the leader's planning will materializes in a bronze colossus with the features of the duce to be erected above Monte Mario [Giunta, Colonnese, forthcoming]. A charcoal bird's-eye view by Enrico Del Debbio proposes an even higher point of view behind the colossus. As in Duperac's prototype, Del Debbio frames the base-museum along the axis and urban area of northern Rome which the silhouette of the colossus is symbolically projected onto; yet, the 'aeronautical' inspiration is revealed by the base transfiguring into an airstrip, the city blurred and the inclined horizon suggesting the beginning of a turn.

When Del Debbio made this drawing, Luigi Moretti had already replaced him at the helm of the architectural complex and propaganda machine of the Forum, which he will carry on until the inevitable interruption induced by the war events. In anticipation of the assignment to Rome of the Olympic Games of 1940 and then of 1944, he had a large model made (fig. 12) that shows the territorial extension of his project. Such a project, which involves kilometres of the Tiber valley, prefigures a new sensitivity to urban design that is increasingly linked to environmental and natural aspects, above all in a perceptive key but not only. It is a sensitivity that, in some way, is also fuelled by a design of the open territory certainly promoted by the view from above offered by airplanes, direct or mediated by the photographs that architects increasingly use in their design and communication process.



Fig. 10. Axonometric view of the general plan of the E42. Author: Ente Autonomo Esposizione Universale Roma, Servizio architettura parchi e giardini, 1940: https://it.wikipedia.org/wiki/EUR (accessed June22, 2023).



Fig. 11. The Colossus over the Foro Mussolini, bird's-eye view. Author: E. Del Debbio, 1933 [Neri, Muirhead 2006, p. 132].

Fig. I 2. Project for the Foro Mussolini. Author: L. Moretti, 1944.

Conclusions

For the futurists of the first and second generation, the experience of flight and speed in an airplane constituted an inexhaustible source of suggestions which found their specific manifestation in aeropainting, from 1926 onwards. Even the image of architecture and cities it came out transformed, fragmented, renewed in many ways. Yet very few of these suggestions disturbed the canon of design representation. We have identified, especially in the bird's eye views, early signs of a different way of seeing and interpreting the architectural and urban project but nothing comparable with the proposals of the aeropainters. We could also mention the curious horizontal perspective of the project for via Roma in Turin elaborated by Nicola Mosso in 1933, a sort of ideal link between the photographs of D'Annunzio mission to Vienna and the late-futurist paintings of Tullio Crali. And there are probably other graphic experiments in the many Italian architectural archives that could testify to this transfusion of aeronautical models between painting and architecture.

In the implicit technical complexity of setting oblique picture plane perspective views angled –today, with digital models, perhaps the opposite is true– it is above all the mediation of photography and models that occasionally contribute to breaking the dogma of the vertical and, through photomontage, to make the images dynamic, always emphasizing the constant presence of a superior authority. At the same time, certain drawings show, as had already happened at the time of Van Wittel and Canaletto's landscape painting mediated by the optical camera, how the architectural scene has gradually assimilated the territory, both in its critical grafts with the historic city, and in its complex relationships with the open territory and the coast.

The study of European architectural experiences contributed to the diffusion of axonometry which, however, did not completely replaced the perspective from above, probably also due to the intrinsic symbolic and figurative value of the horizon. In this unprecedented dialogue with the landscape, which is a prelude to post-war environmental planning, there is often a political will, also on the initiative of the architects themselves, to express continuity with the past, declining the relationship between the three Rome in emphatic terms. But the issue of graphic treatment also has its political implications. If the wireframe graphic representations leave room for the interpretation of the observer, who participates indirectly in the project, pictorial and photographic photorealism takes on the further political connotation of a complete and concluded vision, certainly dear to the regime.

Notes

[1] The Aerostatic Section of the Italian Army was founded in 1884 at the Forte Tiburtino. On his two balloons, Captain Maurizio Mauro Moris will conduct the early photographic experiments.

[2] Alfred Guesdon, L'Italie à vol d'oiseau, 1849 [Orefice 2010].

[3] Viriglio Marchi published the Manifesto of Futurist Architecture on Roma futurista in 1920. The following year, he collaborated with Anton Giulio Bragaglia for the headquarters of his art house.

[4] On September 22, 1929, Marinetti, Dottori, Tato and others published the *Manifesto of Futurist Aeropainting*. This was anticipated by Marinetti's article Perspectives of Flight, taking up the topics of his 1912 essay. In 1930, Tato (Guglielmo Sansoni) also published the *Manifesto of Futurist Photography*.

[5] Noteworthy is Ambrosi's portrait of Ettore Muti of 1940.

[6] In 1938, Ambrosi creates an updated version of the portrait with the University City and the Foro Mussolini.

[7] The formal motif of the wings marks the roof of Roberto Marino's Ministry of Aeronautics in Castro Pretorio (1929) and the entrance canopy of Mario De Renzi, Adalberto Libera and Antonio Valente's Italian pavilion at the Chicago fair (1933).

Credits

This article results of the coordinated work of the two authors. In particular, Fabio Colonnese edited *Introduction, Rome from above* and *Conclusions* while Antonio Schiavo edited *Aero-Roma, Aeropainting* and *Axonometry vs Landscape*.

[8] Somenzi is also the author of a utopian airport-bridge over the Tiber [Lejeune 2008, p. 61].

[9] In particular, the view from the Gianicolo hill established the canon of the urban plans and views, although the artists had learnt how to elevate virtually the point of view and to integrate the visibile data [Fagiolo 2012].

[10] Brasini himself, at the end of the 1930s, from the dominant point of view of his Castellaccio, gives life to a personal vision of Rome, in which his monumental Flaminio bridge and the dome of his project for the church of Sacro Cuore Immacolato di Maria at piazza Euclide rivals that of Michelangelo and Della Porta.

[11] Faludi accompanied the project with an essay entitled *The problem of civil airports* [Faludi 1927].

[12] The group formed by Giuseppe Terragni, Antonio Carminati, Pietro Lingeri, Ernesto Saliva and Mario Sironi presents two different solutions.

[13] See the flying planes frescoed by Antonio Anchilli on the apse of Santa Maria di Loreto at Guidonia.

[14] They are Augusto Baccin, Beniamino Barletti, Adriano Cambellotti, Nello Ena, Pasquale Marabotto, Otto Matelli, Luigi Orestano, Dante Tassotti, Aldo Tomassini Barbarossa e Luigi Vagnetti [L'urbe di Mussolini 1939, p. 21].

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