Governing Corviale
The transformation of housing estates into healthier living spaces

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Mass housing estates were initially conceived to provide healthier living conditions to a wider part of society, however a revision of the wellbeing conditions of their inhabitants proved that these expectations were not necessarily fulfilled (Gifford 2007). The demolition trend of these housing estates that has taken place since the 70s, intensified in contexts such as France in the early 2000s or the UK, has also proved to be harmful to the mental health of the displaced community (Lees 2008). For that reason, the transformation of mass housing estates, opens a new way for improving the

1. The fall of mass housing buildings and the ecological importance of not demolishing

Between the 1930s and the 1970s a new architectural housing typology in the form of high-rise linear blocks gained popularity and its construction spread with the objective of democratizing access to housing. These new mass housing estates embodied the urban ideas of progressive and rational planning that present in the functional city. The functional city had inherited the concerns for public urban health that arose during the period of fast industrialization of the 19th century (Benevolo 1977). For that reason, functional urban models took into consideration hygienic principles such as distance to transportation routes, ventilation and amount of solar exposure required in new dwellings. It also envisioned the integration of new construction technologies such as the use of reinforced concrete that could free the ground floor and provide the

health of the residents while at the same time meeting current environmental goals. The aim of this paper is to conceptualise the effects that the mass housing buildings may have in the governance of the transformation program of a mass housing complex. In order to do so, this paper explores the regeneration program of Corviale, a mass housing building in the outskirts of Rome whose design characteristics add an additional challenge to the governance of its regeneration program. The paper draws on Lascoume Le Gales framework for policy instruments analysis in order to conceptualise the role of built form as a policy instrument. Through this methodology, the paper seeks to contribute to bridging the gap between the studies that focus on the failure of mass housing neighbourhoods as an architectural misconception, and those who study it as a governance problem.

possibility of integrating the new dwellings in larger parks (Mumford, 2002). These urban models were presented and discussed at the International Congresses of Modern Architecture (CIAM) between 1928 and 1959. At the CIAM 2 (Frankfurt, 1929) and CIAM 3 (Brussels, 1930) Walter Gropius defended the construction of high-rise linear blocks surrounded by large pieces of public green, as healthier alternatives to traditional urban layouts with narrow streets and substandard housing models (Monclus & Diez Medina 2016). In the CIAM 4 (1933) the Charter of Athens (published in 1943 by Le Corbusier) gathered the main principles of the modernity and expressed the commitment of the movement to improve the housing standards by providing adequate lighting, wider open spaces and ventilation.

Large housing estates begin to be built according to the Charter of Athens principles, but it didn't take long for urban theorists and practitioners to start arguing against them. As the Charter of Athens principles started to spread around in the 1950, urban theorist such as J. Jacobs, A. Rossi or C. Alexander condemned many of the aspects of modernist urbanism and in particular the construction of mass housing estates (Monclus & Diez Medina 2016). The rejection did not only come from expert considerations. By the beginning of the 1970s, mass housing estates were considered by society as a proxy for pathologically rooted 'urban problems', including crime, gang violence, ghettoization and drug misuse (Graham 2015). Since then, different authors have studied the impact of mass housing states in

its residents (e.g., Angrist, 1974; Cappon, 1972; Conway, 1977). Their research suggests that far from the modern promise of a healthier environment, the mass housing estates built between the 30s and the 70s seemed to have had a negative impact in the health and security of its inhabitants (Gifford 2007). The noxious perception of mass housing estates, led to the demolition of some of the most recognisable mass housing projects of the second half of the 20th century, such as Pruitt-Igoe, in St. Louis, the Robinhood Gardens in London, the slab Monmousseau in Lyon or Le Vele di Scampia in the suburbs of Naples. In France, as described by A. Berland-Berthon (2012), the practice of housing demolition has been reshaped as a legitimate line of action regarding the management of public housing stock, as it was integrated as a tool within the French

Urban Renewal National Program in 2003. R. Epstein (2012) develops this argument further, pointing at the ANRU (The National Agency of Urban Renewal) as an institution that not only integrated the practice of demolition as a tool but intensively encouraged its use.

In the context of acceleration of climate change and acknowledging that the environmental impact of transforming housing buildings is considerably lower than that of demolition (Power 2008), voices coming from both academic and professional environments (e.g. C. Hutin, L. Lees 2008) have started claiming a transition to a model of sobriety in urban development that defends the practice of transformation over building new constructions. Back in 1990 The Institut für Wohnen und Umwelt assessed how to reduce both energy and air pollution, the transformation of existing buildings need-

**The second stage
of demolition of the
Pruitt-Igoe, April 1972.**
Fig. 1
Photo: Lee Balterman/Time & Life Pictures/
Getty Image

ed to be intensified as a practice (IWU, 1990). Since then, the urge to reduce the energy consumption within the construction industry has motivated numerous studies on energy consumption (Kohler et al. 2002), including research on the environmental benefits of transformation over demolition. In this line the work of the architects A. Lacaton and J.P. Vassal is particularly interesting, as they have not only created innovative low-tech strategies for housing retrofitting (Baker-Brown 2019), but they have engaged in a practice of housing transformation that intends to mitigate the current negative effects that housing estates have on the health and social environment of its residents. The architects proposed a transformation strategy where the building, instead of being taken as a whole, is divided into different elements that can be transformed following a technical logic that remind to bricolage (Otkunc 2015). By identifying the effects that the different "pieces" of the housing estate have on the wellbeing of the residents, and acting exclusively on them, the architects develop an effective transformation strategy that enhances the health experience of inhabitants while matching with contemporary climate objectives. Mass housing estates were initially conceived to provide healthier living conditions to a wider part of society, however a revision of the wellbeing conditions of their inhabitants proved that these expectations were not necessarily fulfilled (Gifford 2007). The demolition trend of these housing estates that has taken place since the 70s, intensified

in contexts such as France in the early 2000s or the UK, has also proved to be harmful to the mental health of the displaced community (Lees 2008). For that reason, the transformation of mass housing estates, exemplified through the work of Lacaton and Vassal opens a new way for improving the health of the residents while at the same time meeting current environmental goals.

This paper studies Corviale, a 1 km slab block, conceived for housing 8500 inhabitants in the outskirts of Rome, in the late 70s, a moment of intense housing shortage in Italy. As in previously cited mass housing examples, Corviale was also considered a "social failure" (Campanella, 1999, p. 72). However, Corviale avoided demolition and has undergone a long transformation process, envisioning a healthier future for its residents. This transformation is in line with some of the principles of Lacaton and Vassal operations, that exemplify a different way of dealing with inherited mass housing estates. A building transformation capable of improving the wellbeing conditions of residents requires a previous analysis of the effects of the built form in the individual and collective perception of the building. The aim of this paper is to track down how the different parts of Corviale have conditioned the life within the building and affected its governance. For that, and in line with the approach taken by Lacaton and Vassal, the building is not considered as a whole, but as a sum of elements which may produce different effects. Numerous researchers on mass housing es-

tates have studied how specific architectural elements may impact the living conditions and therefore the behaviour of residents (e.g. Coleman 1985, Gifford 2007). Literature on this topic has generally had the objective of delving into material causes that could explain urban decay processes. However, there is a gap in the literature completing the sequence of events for which form has an influence on the living condition of residents, which scatters secondary processes that condition the governance of housing estates. These wider constellation of effects and actors, related not only to the living conditions of housing estates but also to wider governance dynamics, may be use for studying the material causes that influence not only urban decay but also urban transformation processes. This paper takes the case of Corviale to rebuild the chain of effects and conditions that connect the form of a mass housing state with the living conditions of residents and the governance of the building. Following a qualitative methodology, through the review of historical documents, academic literature and semiformal interviews, the study rebuilds the political life of Corviale, since its conception to its transformation process. The paper studies Corviale as a common case of urban decay but an extraordinary case of urban transformation. It analyses these two processes through both a more traditional political science analysis that takes into consideration actors, political goals and policies, and a larger analysis that studies the governance of Corviale as a constellation of effects where the the material form of the building plays a specific role.

The paper defends that Corviale, as a mass housing building, does policy. Drawing on Lascoumes and Le Galès (2007) theory, this study conceptualizes the role of the built form within their political sociology framework. The study investigates the characteristics of policy instruments, and through different examples justifies the conceptualisation of Corviale as such. Through the case of Corviale the paper researches the capacity of policy instruments to, by "acting under its own logic" (Lascoumes and Le Galès, 2007), influence governance. Section 2 of the paper is a literature review of the different theories that question how built space relates to social action. In section 3, we conceptualize the role of built form as a policy instrument. Section 4 is divided into four subsections and explores through a chronological review, the role of the building in the sequence of events that scatter both the urban decay of Corviale and the will for its transformation.The stratification of regeneration interventions that have taken place in the history of Corviale, do not define a linear story of success, nor illustrate a methodology of regeneration worth abstracting. Corviale is a building described as a social failure (Campanella, 1999, p. 72) that for unclear reasons is still standing and can tell an unexpected story of how the governance of the regeneration of such buildings does work today.

2. Literature review, between spatial analysis and social studies

This study builds on the existing literature that argues that demolishing mass housing estates have mental impacts for the local population (Lees 2008) and larger environmental consequences for the whole metropolitan area (Chen 2020). This paper seeks to contribute to bridging the gap between the studies that focus on the failure of mass housing neighborhoods as an architectural misconception (Jencks 1978; Coleman 1985, Wassenberg 2018, Rowe 2011), and those who study it as a governance problem (Ravetz 2003, Power 1999).

The end of modern architecture according to the architecture critic Charles Jencks (1978), could be precise to the very specific moment where Pruitt Igoe Housing in St Louis, were demolished. With this demolition, also accounted by Peter Hall in his seminal text *Cities of Tomorrow (2014)*, the design principles of modern architecture were universally condemned, and since then, several academic studies have been dedicated to analysing the "mistakes" of modern mass housing design. F. Wassenberg (2018) identified in his research how the large size of mass housing buildings, the monotony of the spatial distribution and the separation of lanes for pedestrians and cars were design features that conditioned the lack of social control of mass housing complexes.

Parallel to this academic research trend, numerous scholars have explored the decline of mass housing estates as the result of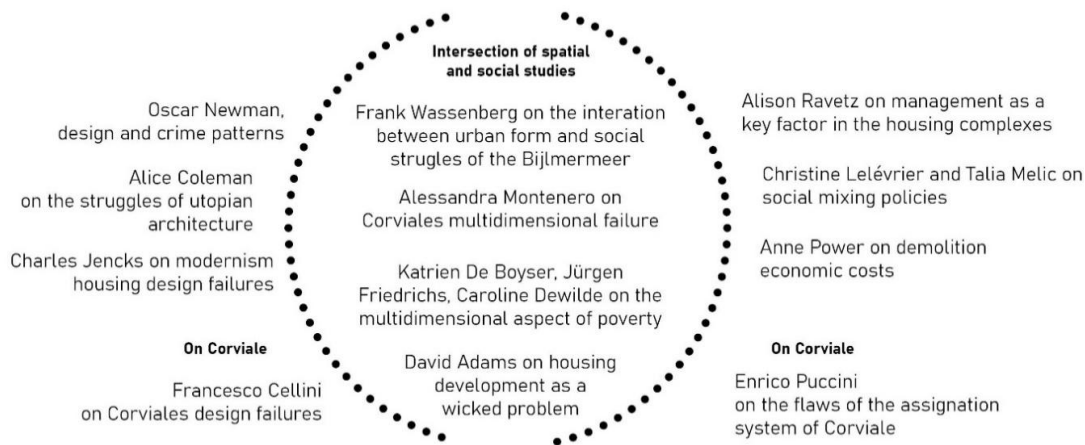 a governance struggle. In the book Model Estate (2013), Alison Ravetz stressed management as a key factor in the decline of housing complexes through the study of Quarry Hills, a local authority housing scheme in Leeds, built under a utopian vision of community services sharing. Additionally, Christine Lelévrier (2021) related the social decline of mass housing buildings to the failure of social mixing policies included in the urban renewals projects of the ANRU through the study of two 1960s housing estates in the suburbs of Paris, Orly and La Courneuve.

The division in two approaches to mass housing failure, as both a design and a governance struggle is also present in the academic literature that addresses the case of Corviale. In an interview by Gabriele Bartocci (2010) the architect Francesco Cellini pointed at the design of Corviale for the failure of the building as a housing complex, by identifying the number of entrances to Corviale and its inner distribution of flows as main design issues to explain the failures of the building, whereas Enrico Puccini, president of the Osservatorio Casa Roma, focused his research on Corviale on the flaws of the assignation system of housing units of the building.

There is lack of interactions among researchers that study housing failure from the perspective of social sciences and those who study it from a spatial analysis, as space has for long not been recognised as an essential feature of social relations, (Kesteloot et al. 2016).. However, this study intends to approach the

Decline of mass social housing as the result of poor design

Decline of mass social housing as the result of a governance struggle

Intersection of spatial and social studies

Oscar Newman, design and crime patterns

Alice Coleman on the struggles of utopian architecture

Charles Jencks on modernism housing design failures

Frank Wassenberg on the interation between urban form and social strugles of the Bijlmermeer

Alessandra Montenero on Corviales multidimensional failure

Katrien De Boyser, Jürgen Friedrichs, Caroline Dewilde on the multidimensional aspect of poverty

David Adams on housing development as a wicked problem

Alison Ravetz on management as a key factor in the housing complexes

Christine Lelévrier and Talia Melic on social mixing policies

Anne Power on demolition economic costs

On Corviale

Francesco Cellini on Corviales design failures

On Corviale

Enrico Puccini on the flaws of the assignation system of Corviale

Literature review on the intersection of special and social studies
Table 1

failure and renewal process of mass housing estates from a multidimensional perspective, and for that reason, the references of authors who have integrated are particularly valuable for the study. The multidimensionality of urban decay was present in the book Defensible Space by O. Newman (1972), where the author links the safety and liveability of a place, with its physical layout. His work was later referenced in the work of F. Wassenberg on the Bijlmermeer housing complex (2018). F. Wassenberg is among the authors who have integrated a multidimensional approach in their analysis of mass housing failure.

The multidimensionality of mass housing decay and renewal has also been latent in some of the studies of Corviale. Some interviews to

members of the architecture team of Corviale presented in the study of Maracchia F. (2005) revealed how "the lack of a strong and decisive role on the part of the administration" (Arch. Alessandra Montenero. Conversazione sul quartiere Corviale. In F. Maracchia) represented a crucial flaw in the maintenance of the integrity of the building. Additionally, Mario Fiorentino, the head architect of Corviale's original project had stated after the building was finished that "The challenge of Corviale is in the way it will be managed, all this experience is made of architecture and management" (Mario Fiorentino, as cited in Piazza & Scopelliti, 2006, p. 10). In a recently published study of Corviale, C.F. Di Giovanni stated that "Corviale was designed as an experiment:

Level of observation	Description (Lascoumes and Le Galès 2007)	Social housing case (based on A. Wood 2018)
Instrument	Type of social institution	The mass **social housing building** in itself
Technique	Concrete device that operationalizes an instrument	**Architecture** as a specfic type of knowledge and technique
Tool	Micro device within a technique	**Elements of the architecture**, such as the use, the vertical flows, the footprint of the building

Social housing as policy instruments (after A.Wood 2018 application of Lascoumes and Le Galès model)

Table 2

50% was architecture and the other 50% was management" (Di Giovanni 2019). This study approaches the study of Corviale with a different logic, by presenting the relation between architecture and management as an intricated ecosystem of causalities among actors, institutions and context, where management and architecture play roles that neither are isolated, nor oppose to each other.

3. Theoretical Framework, social housing buildings as policy instruments

Considering that social behaviour and communal living is going to be affected by the built space, this paper explores the influence of built space in the governance of a collective housing complex. Framing social housing as a policy instrument, and architecture as the technique that operationalizes instruments, opens a way for studying the relation between architecture and governance.

The research on policy instruments has been developed for studying public policy failures and for tracking changing forms of governance (Salomon 2002). Policy instruments are described by Lascoumes and Le Galès (2007: 5) as devices that are both technical and social that organize specific social relations between the state and those it is addressed to (...). The authors question the presumed neutrality of both the choice and the type of policy instrument that are present in the operationalization of public policy. Within their studies, they define policy instruments as a particular type of institution and describe how instruments structure public policy and modes of governance according to their own logic. Lascoumes and Le Galès additionally propose three levels of observation for exploring public policy instruments: Instruments as a type of

vinstitution that determines the way in which the actors are going to behave, techniques as a concrete device that operationalizes the instrument, and tools, which are the microdevices within this technique.

Built form influences behaviour and communal living, its effects are present over long periods of time and involve the action of different actors. This paper turns to Lascoumes and Le Galès (2007) framework to conceptualize "built policy" (Wood 2018: 466). The dual material-semiotic nature of buildings relates to the description of policy instruments as both "technical and social devices". However, although the materiality of instruments is suggested through the description provided by Lascoumes and Le Galès, it is never really explored through their book Gouverner par les instruments (2007). Instead, the relation between the material dimension and action has been mostly explored through the Action-Network Theory (ANT), mainly developed by Bruno Latour (2007). According to ANT, buildings have embedded within their own structure "action programmes", which regulate people's behaviour and action. As described by Latour, buildings have the capacity to "act" through spatial delimitation, guiding human movement along space and by allowing or interrupting lines of vision. They can be entered, and by doing so the visitor subjects itself to someone else's design. Their presence through time provides an endurability of the social (McCarter 2016: 27). Buildings represent at the same time a technique of power, control, and management of spatial relations (Maguire et al. 2011, p:599).

This study learns from the material approach of ANT to transfer it into policy instruments theory, which despite having some resonances with ANT, differs from it in that it stablishes a clear difference between the actors, the policies and the institutions. This difference will be key for structuring the influence of built form on social interactions and governance processes. To study Corviale as a public policy instrument, social housing buildings are mapped to Lascoume and Le Galès framework, based on the application method A. Wood (2018) uses for conceptualizing public school buildings as policy instruments. Following the proposed levels of observation described in the framework, it is possible to identify how, for the case of social housing, the instrument, described as a type of social institution, would be the mass housing building itself. The technique, described as the device that operationalizes the instrument, is for the case of social housing, architecture. And finally, the tools, described as the micro devices within the technique, are the different resources through which architecture influences and modifies the behaviour and communal living.

4. Governing Corviale
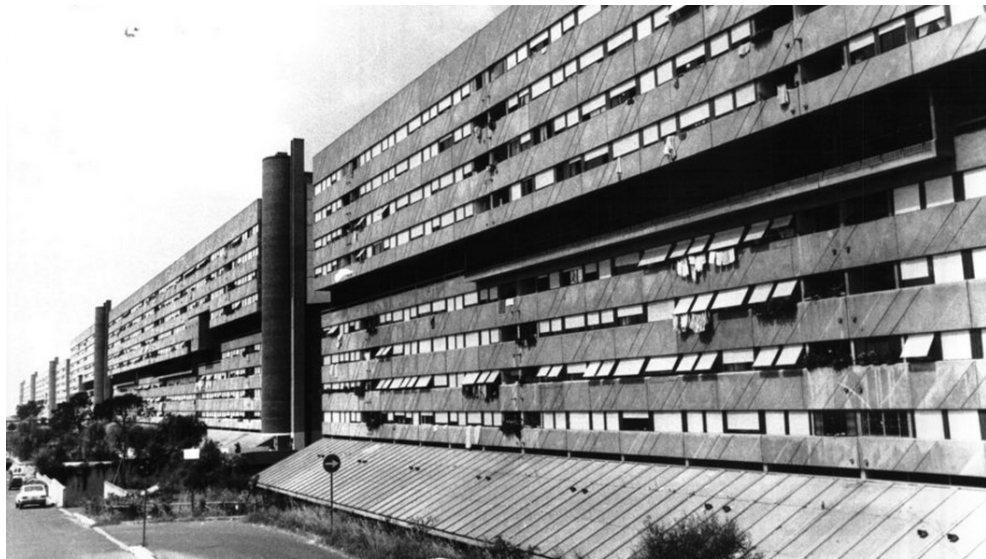
**East facade of Corviale, 1983**
Fig. 2
Unknown photographer, Archivio La Unità

Corviale is a 1 km long public housing slab for 8500 inhabitants, in the southwest suburbs of Rome. The building was built between 1975 and 1984, as a result of the PEEP I (Piano du Ediliza Economica e Popolare) of Rome, approved in 1964 (Campanella 1999). Its outstanding proportions, the austerity of its aesthetics, its location in the periphery of Rome, and the concentration of low-income residents quickly fuelled its urban stigmatization (Clough Marinaro, 2020:197). Designed by a group of architects led by Mario Fiorentino, Corviale was influenced by models of collective housing Karl Marx Hof in Vienna and Le Corbusier's Unites d'habitation. Fiorentino envisioned a self-sufficient complex with integrated services, schools, elderly care inside the structure. The monumental character of the building was intended to valorise collective public house projects, and its longitudinal form and location (almost as a barrier that limits the city expansion by separating it from the countryside) was read as a critique to the never-ending urbanization trend of the 60s (Campanella 1999). The radical morphology of Corviale's design, make this social housing project a well fitted example, to illustrate, with additional clarity, the relation between built form and governance (ibid.).

This section intends to showcase how Corviale, as a social housing building, does policy and influences governance. The chapter is divided in four different parts and it gives account on who have been the actors involved in the governance process of Corviale and what were the main policy changes. Through four different examples, It showcases how the built form may work as a policy instrument, and is at the same time a reason and a cause of those changes.

4.1. Architecture as a technique: *Challenging*
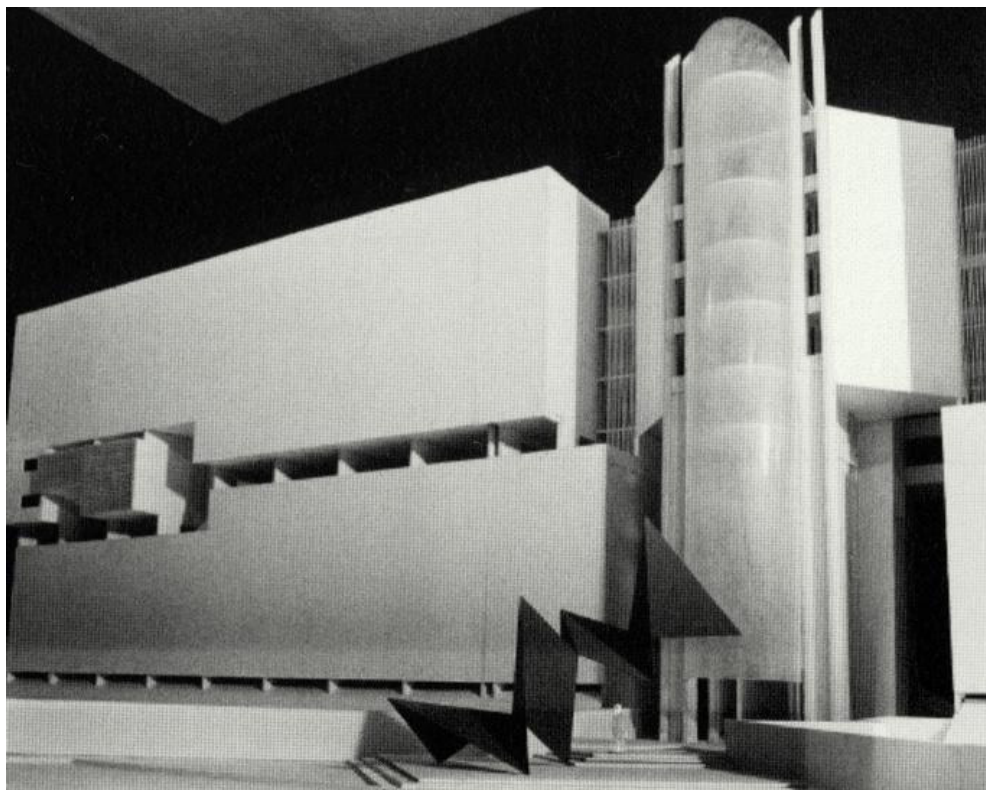
traditional housing through the project

Corviale was conceived during the "years of lead" (Del Monaco, 2009), between the 60s and the 80s, characterized by housing and employment shortage. The Italian public institutions of the time answered by increasing the public contracts and creating intensive public housing programs (Di Giovanni, 2020:34). Corviale was a project of the first PEEP, approved in 1964, which foresaw an enormous urban expansion of the city of Rome. The I PEEP reported many problems in the instrumentalisation of its policies, related to the lack of resources and troubles in the expropriation (CRESME 2007, p 96-100). In the 70s the production of social housing increased. In 1972 all the decisions and powers regarding social housing (what was built, where, and how it was managed) were unified in Rome in a single agency, the IACP (Istituto Autonomo Case Popolari), that depended on the Local Administration of Rome. This union allowed for the first time to conceive a centralized management of the built patrimony. The IACP manifested during those years an ambition to increase the quality of the future housing projects (Campanella 1999).

The aim of improving the quality of the new social housing was operationalised through an experimental approach in the conception of the new buildings. The IACP commissioned the design of the new housing buildings to well-known Italian architects of the time, instead of choosing internal technicians. The design of Corviale was then given to a team of architects led by Mario Fiorentino. They received the commission of "imagining propos-

Model of Corviale produced by the architecture team
Fig. 3 (previous page)
Photo: Studio Mario Fiorentino, 1970, Archivio Fiorentino, Roma

als that challenged the traditional models of housing, in order to bring modernity to Rome's social housing heritage" (Campanella 1999). The expected complexity of the proposals was assumed to be accompanied by a more active involvement of the managing administration (ibid). Architecture, or to be more precise "radical architecture principles" (Cellini 2016), were chosen at this moment as the technique to operationalize the policy goal of achieving a better quality of social housing.

4.2. Architectural elements as tools: *Regulating through flows*

The building consists of nine floors tall, 1km long slab, divided by five distributed towers where the vertical connections (elevators and staircases) of the building are grouped. The nine floors of housing are interrupted in the middle by a "free floor" that hosts different commercial services. "The challenge of Corviale is in the way it will be managed, all this experience is made of architecture and management", mentioned in an interview the architect Mario Fiorentino (as cited in Piazza&Scopellity, 2006, p.10), in relation to the high complexity, not only of the built form, but on the management that should accompany it. However, the sophisticated management that the structure requested never arrived. By the late 70s, the role of IACP had changed again from the single actor in the management of the public housing development, it was reframed as a supporting institute. Before the building of Corviale was

even finished, the national interest in developing social housing had lowered (Campanella 1995). The institute was not any more in charge of deciding what was built, nor how it was managed, these responsibilities were now part of the local council through the PEEP of Rome, and the national government, who managed funding. The few tasks left for the institute were related to the maintenance of the existing built patrimony (Ibid, p:17).

Corviale was informally occupied almost right after the first housing units were assigned. In an interview in 2016, architect Francesco Cellini (2016) mentioned that the cause of this informal occupation was the deregulated management of the assignment of apartments that took place in 1982, before the construction of Corviale had been concluded. As explained by the architect, this rushed assignment favored the illegal occupation of a part of the common areas. A closer study of the building supports this claim. The complexity of the long building was not dealt with by the IACP, whose power and funding had been reduced in those years. In the moment of the first assignments only 4 of the 74 elevators of the building were working (Campanella 1999), however the building was opened in its total length.

Having opened the Corviale in its total length, without functioning elevators in the 5 main towers, changed the vertical flows of the building. The residents would not walk the 200m to reach the main staircases, and instead used the fire escapes distributed along the building.

The architecture counts with flows of people as a tool for control (Jacobs, 1961). Changing the flows in Corviale modified the way surveillance was operationalized. Some areas of the building that originally were meant to host most of the flows, such as the long corridors between apartments, and the free floor at the 4th level were left empty. The lack of daily transit facilitated its informal occupation.

The description of this event in Corviale's history exemplifies how architecture operates as a technique, and flow operates as a tool within the wider instrument of social housing. The ability to identify the different tools of architecture, in a building such as Corviale, may provide the housing authority with major resources for operationalising control and management in the built environment.

4.3. Architectural elements as tools: *Perpetuating informalities through the free floor*

The public approach to illegal housing in Italy has been characterized by a structural ambivalence between repression and tolerance. (Chiodelli et al. 2020). Informality is described as a space of negotiation between actors and regulatory boundaries. For the case of Corviale, some of these regulatory boundaries were the structure of the building in itself.

Two years before the construction works were finished, around 700 people occupied different areas of Corviale. 7 years later, 120 apartments were illegally built in the "free floor", blocking the open corridor that was initially meant for hosting services for the community. At that point, hostile relations were established among the IACP and the residents of Corviale. Formal residents did not want to pay for the maintenance and the energy consumption of the whole building while a lot of units were squatted, especially since many services were still lacking. The suspension of the payments by the "assignee inhabitants" led even more to the reduction of the investment from the IACP (Clough Marinaro, 2020). The informal occupation of the "free floor" represented a change in the use of the program of this floor, initially planned for a commercial purpose, and turned, after the occupation, into a dormitory. This change in the use of the space was not planned by the housing authorities, but it was somehow tolerated through their inaction. This change was feasible as the "free floor" which was meant to host services, had the infrastructure capacity to host the self-built 120 apartments that took form along the corridor. According to Lascoumes and Le Galès (2007) "instruments structure public policy and modes of governance according to their own logic". The "free floor" had been designed as a tool for providing services that could promote the self-sufficiency of the neighbourhood. Instead, the own characteristics of the tool; being empty, open, connected to the general staircases, and provided with energy and water infrastructure, allowed for a directional change in the performance of the tool that, as in the description of Lascoumes and Le Galès, started working according to its "its own logic".

### 4.4. Social housing as instruments: *Transform-*

ing Corviale through its symbolic dimension

Corviale, described as "Possibly the most important and symbolic public housing district in Italy" (ATER, 2015, p.6), had almost from the beginning of its constructions, actors who praised its design, and others who wanted to break it down. Its monumental dimension, its ambitious program and its severe aesthetics raised the attention of politicians, media, cultural groups and even the Pope.

In 1983 appeared the first articles that reported the existing social troubles of Corviale. Since then, Corviale often reached national attention, through news that reported events of criminal activities and substandard housing conditions. The continuous presence of Corviale in public media motivated the IACP to organize a workshop named "an idea for Corviale". The workshop gathered the neighbours of Corviale, the directors of the IACP and architects. Neither the regional authorities, nor the local authorities were present at the event. During the workshop, the neighbours denounced the constant criminalisation of Corviale that was broadcasted in the media, contributing to the stigmatization of the neighbourhood. After this workshop the IACP promised an increase in the funding for maintenance of the building. The story repeated itself only a couple of years later, again as a reaction to the defamatory news, the resident council organized a new workshop that counted this time, not only with the presence of the director of the IACP, but also with representatives of the local authorities. After this debate the IACP mobilized funding for updating the heating system and fixing the elevators.

Along those years, the debate on whether Corviale should or should not be demolished was very present. Opposing opinions appeared in
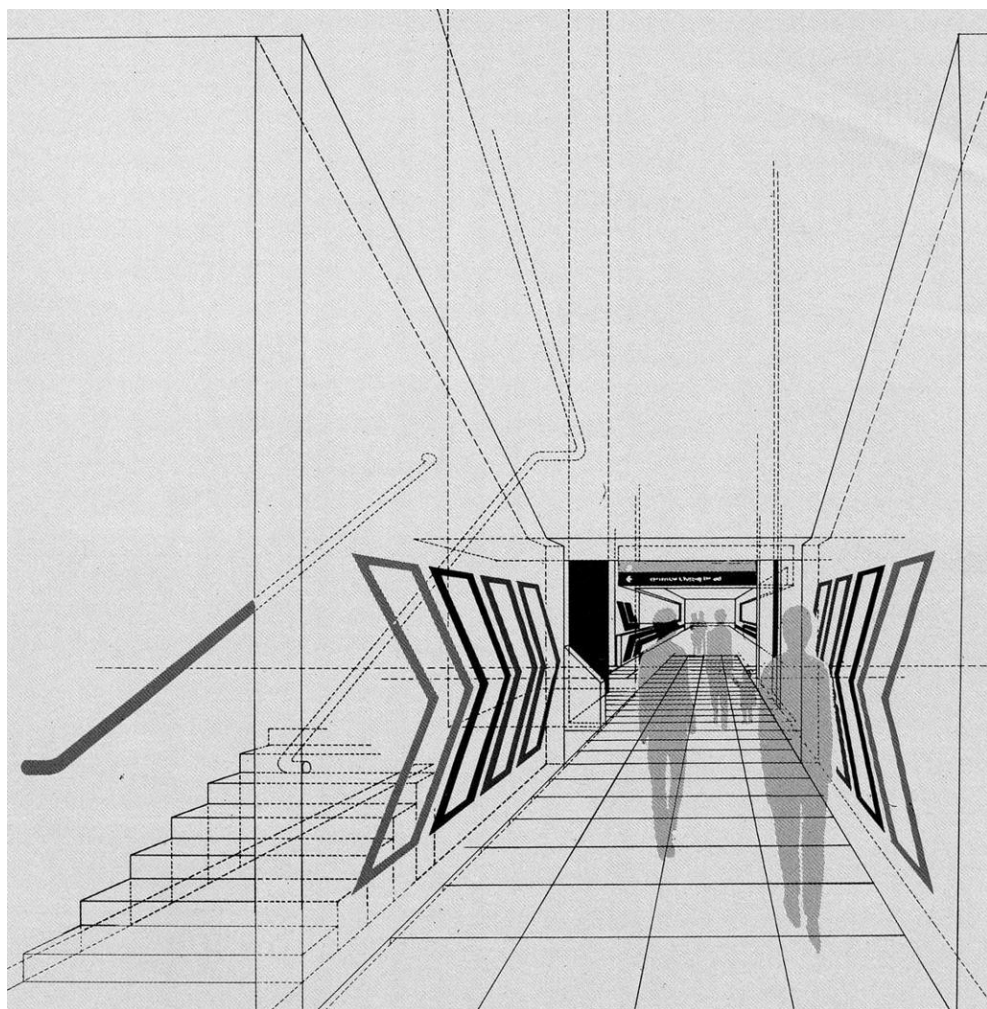
the media, coming from politicians and local authorities. Corviale became during the 90s also an attractor of artists and intellectuals who romanticize through their own work the state of abandonment of the building. In 2004 the Lazio Region approved a plan for funding the regeneration of Corviale. The first action of this plan was the requalification of the "free floor". The social accompaniment of this requalification (planned to avoid evictions) was done by the Public Policy lab of the University Roma Tre, who had established its office in Corviale.

Corviale as a symbol and a discourse, raised the curiosity of outsiders, as well as it contributed to the creation of a community feeling among its residents. This opposing position among those who were interested in the sensationalist details of the neighbourhood, and those who opposed the defamatory news, clashed into a conflict. This conflict was instrumentalized by its residents into a way of pressuring the authorities to react by improving the maintenance of the building. Lascoumes and

**Perspective of the "free floor"
drawn by the architecture team,
Studio Mario Fiorentino, 1970**
Fig. 5
Archivio Fiorentino, Roma

Le Galès define policy instruments as a mix of technical and social (representation and symbol) components. This section showcases how Corviale's regeneration program was influenced by both the capacity of Corviale as a policy instrument to gather a community feeling, and the reaction to its representation of social struggle in national news.

5 Conclusions

This study looks into the case of Corviale, an Italian colossal residential building of the 70s, to, track how this influence conditioned the approval of a transformation plan for Corviale. As stated in the introduction of this paper, the transformation of mass housing estates opens a new way for improving the health of the residents while at the same time meeting current environmental goals.

For that reason, this paper questions what influenced the governance process of Corviale to avoid demolition and reach the political compromise of a transformation of the building. Instead of focusing exclusively on the power dynamics around the governance of Corviale, the paper delve into the influence of mass housing buildings in the governance of housing estates. In order to study this relation, two questions are explored in the paper. The first one explores if housing buildings can be conceptualized as policy instruments. The second one builds on the first one, and questions whether by framing buildings as policy instruments, we can study how they influence modes of governance. The paper uses the definition of policy instruments provided by Lascoumes and Le Galès (2007) that points out how these instruments are both technical and social devices, with the capacity to structure modes of governance according to their own logic.

Institutional neglect is often one of the main causes for the social struggle that takes place in complex mass housing projects. As stated by the director of Rome's urban planning office in 2005 for the case of Corviale: "some time ago we gave up (…) managing public housing estates considered too difficult" (Clough Marinaro 2021). The main hypothesis of this study considers that understanding the role that built form plays in the governance of a public housing project, increases the resources of management and control of the housing managing authority, and therefore promises a better resolution of potential social conflicts. As seen in The Rushed Assignation section, the flow of people inside a building may be considered a tool within a policy instrument. The unplanned modification in the flows of Corviale that took place when the housing authority decided to start operating the building before the elevators were installed, represented a relevant modification of the instrument. Conceptualizing the different spatial resources of Corviale, such as flow, as micro devices of a policy instrument, for integrating them within the operalization of a policy goal, is an example of how to provide the housing authority

Construction of Corviale, 1973
Fig. 6
Unknown photographer, Archivio La Unità

with more resources to manage the building.

By studying the influence that buildings may have in the governance of a housing project, this paper contributes to the quest in spatial sociology that examines the agency of buildings in shaping society. The Regeneration Program section analyses how the representation and symbolic dimension of Corviale seems to have influenced the modes of governance and promoted a shift in the attitude of the management and regional authority (from inaction to more active involvement (Chiodelli et al. 2021)).

This paper argues that the built form of mass housing buildings influences their governance and gives examples to show the different tools through which Corviale, as a built policy instrument, can operate. This study may be used as a theoretical base for exploring further the specificities of the governance process of Corviale as a particular case. It could be the first step of a wider analysis that explores why, against the generalized demolition trend of housing megastructures, Corviale is being regenerated.

Mass housing buildings are not generally demolished because of structural or formal failures, but for the social problems this type of buildings often encounter. Regeneration programs are aimed to raise the quality of life and health of its residents through social and spatial transformation strategies. The threat of the climate crisis urges us to come up with zero carbon urban solutions. Studying the complex governance behind regeneration programs of mass housing buildings may generalize their application, and prevent the unnecessary carbon emissions, and social impact involved in a process of demolition and new construction.

Bibliografia

Akrich, M. 1992. *The de-scription of technical objects.*

Albert, M. D., Patel, S., Hutin, C., & Tillim, G. 2010. *Engagements: Pour un droit á la ville. Architecture d'aujourd'hui, (379), 67-84.*

Alexander, C. 1965. *'A City Is Not a Tree'. Architectural Forum, no. 122: 58–62.*

Angrist, S. S. 1974. *Dimensions of well-being in public housing families. Environment and Behavior, 6, 495-516.*

Bartocci, G. 2016. *Conversazione con Francesco Cellini sul progetto per il rinasamento del Quartiere Corviale di Roma. Firenze Architettura, 20(1), 64-69.*

Banham, R. 1976. *Megastructure: urban futures of the recent past. The Monacelli Press, LLC.*

Bourdieu, P. 1977 . *Outline of a Theory of Practice , Cambridge : Cambridge University Press*

Bourdieu, P.1981. *Men and Machines,I n Karin Knorr-Cetina and Aaron Cicourel, editors, Advances in Social Theory and Methodology (London: Routledge), 305-306*

Baker-Brown, D. 2019. *Palais de Tokyo and La Tour Bois-le-Prêtre, by Lacaton & Vassal. In The Re-Use Atlas (pp. 89-92). RIBA Publishing.*

Benevolo, L., 1977. *History of modern architecture (Vol. 2). Mit Press.*

Berland-Berthon, A. 2012. *La démolition des immeubles de logements sociaux. L'urbanisme entre scènes et coulisses. In Les Annales de la recherche urbaine (Vol. 107, No. 1, pp. 6-17). Persée-Portail des revues scientifiques en SHS.*

Campanella, N. 1995. *Roma: Nuovo Corviale: miti, utopie, valutazioni: stato dei servizi, condizioni di vita degli abitanti di un sistema residenziale della periferia. Bulzoni Editore.*

Cappon, D. 1972. *Mental health in the hi-rise. Ekistics, 33, 192-196*

Chen, X., Zhu, H., & Yuan, Z. 2020. *Contested memory amidst rapid urban transition: The cultural politics of urban regeneration in Guangzhou, China*

Chiodelli, F., Coppola, A., Belotti, E., Berruti, G., Marinaro, I. C., Curci, F., & Zanfi, F. 2021. *The production of informal space: A critical atlas of housing informalities in Italy between public institutions and political strategies.*

Clough Marinaro, I. 2021. *Living the liminal life: informalities in a utopian housing project. International Journal of Housing Policy*

Coleman, A. 1985. *Utopia on trial.*

Colomina, B. 2019. *X-ray Architecture. Zürich: Lars Müller Publishers*

Conway, J., & Adams, B. 1977. *The social effects of living off the ground. Habitat International, 2, 595-614.*

Coppola, A., & Punziano, G. 2018. *Roma in Transizione. Governo, strategie, metabolismi e quadri di vita di una metropoli.*

Cremaschi, M. 2021. *Regulation by Design. Regulation and Planning: Practices, Institutions, Agency,*

CRESME 2007. *Abitare la periferia. L'esperienza della 167 a Roma. Roma, Italy: Camera di Commercio Industria Artigianato a Agricoltura di Roma*

Di Giovanni, C. F. 2019. *Lessons from Corviale: from the critical factors of Public Housing Plans towards a methodology for urban regeneration. Italian Journal of Planning Practice*

Epstein, R. 2012. *ANRU: mission accomplie?. In À quoi sert la rénovation urbaine? (pp. 51-97). Preses Universitaires de France.*

Frampton, K. 1999. *Megaform as Urban Landscape, Raoul Wallenberg Lecture.*

Foucault, M. 1984. *Des espaces autres. Architectura, Mouvement, Continuite, Oct.*

Akrich, M. 1992. *The de-scription of technical objects.*

Albert, M. D., Patel, S., Hutin, C., & Tillim, G. 2010. *Engagements: Pour un droit á la ville. Architecture d'aujourd'hui, (379), 67-84.*

Alexander, C. 1965. *'A City Is Not a Tree'. Architectural Forum, no. 122: 58–62.*

Angrist, S. S. 1974. *Dimensions of well-being in public housing families. Environment and Behavior, 6, 495-516.*

Bartocci, G. 2016. *Conversazione con Francesco Cellini sul progetto per il rinasamento del Quartiere Corviale di Roma. Firenze Architettura, 20(1), 64-69.*

Banham, R. 1976. *Megastructure: urban futures of the recent past. The Monacelli Press, LLC.*

Bourdieu, P. 1977 . *Outline of a Theory of Practice , Cambridge : Cambridge University Press*

Bourdieu, P.1981. *Men and Machines,I n Karin Knorr-Cetina and Aaron Cicourel, editors, Advances in Social Theory and Methodology (London: Routledge), 305-306*

Baker-Brown, D. 2019. *Palais de Tokyo and La Tour Bois-le-Prêtre, by Lacaton & Vassal. In The Re-Use Atlas (pp. 89-92). RIBA Publishing.*

Benevolo, L., 1977. *History of modern architecture (Vol. 2). Mit Press.*

Berland-Berthon, A. 2012. *La démolition des immeubles de logements sociaux. L'urbanisme entre scènes et coulisses. In Les Annales de la recherche urbaine (Vol. 107, No. 1, pp. 6-17). Persée-Portail des revues scientifiques en SHS.*

Campanella, N. 1995. *Roma: Nuovo Corviale: miti, utopie, valutazioni: stato dei servizi, condizioni di vita degli abitanti di un sistema residenziale della periferia. Bulzoni Editore.*

Cappon, D. 1972. *Mental health in the hi-rise. Ekistics, 33, 192-196*

Chen, X., Zhu, H., & Yuan, Z. 2020. *Contested memory amidst rapid urban transition: The cultural politics of urban regeneration in Guangzhou, China*

Chiodelli, F., Coppola, A., Belotti, E., Berruti, G., Marinaro, I. C., Curci, F., & Zanfi, F. 2021. *The production of informal space: A critical atlas of housing informalities in Italy between public institutions and political strategies.*

Clough Marinaro, I. 2021. *Living the liminal life: informalities in a utopian housing project. International Journal of Housing Policy*

Coleman, A. 1985. *Utopia on trial.*

Colomina, B. 2019. *X-ray Architecture. Zürich: Lars Müller Publishers*

Conway, J., & Adams, B. 1977. *The social effects of living off the ground. Habitat International, 2, 595-614.*

Coppola, A., & Punziano, G. 2018. *Roma in Transizione. Governo, strategie, metabolismi e quadri di vita di una metropoli.*

Cremaschi, M. 2021. *Regulation by Design. Regulation and Planning: Practices, Institutions, Agency,*

CRESME 2007. *Abitare la periferia. L'esperienza della 167 a Roma. Roma, Italy: Camera di Commercio Industria Artigianato a Agricoltura di Roma*

Di Giovanni, C. F. 2019. *Lessons from Corviale: from the critical factors of Public Housing Plans towards a methodology for urban regeneration. Italian Journal of Planning Practice*

Epstein, R. 2012. *ANRU: mission accomplie?. In À quoi sert la rénovation urbaine? (pp. 51-97). Preses Universitaires de France.*

Frampton, K. 1999. *Megaform as Urban Landscape, Raoul Wallenberg Lecture.*

Foucault, M. 1984. *Des espaces autres. Architectura, Mouvement, Continuite, Oct.*

Foucault, M. 1975. *Discipline and punish: The birth of the prison. Gallimard.*

Garcìa-pérez, S., Dìez Medina, C. & Monclùs, J. 2021. *Intervention follows diagnosis: analysis' impact on open space regeneration in mass housing estates, 147-158.*

Giddens, A., & Gregory, D. 1984. *Space, time and politics in social theory: an interview with Anthony Giddens. Society and space London*

Giddens, A. 1979. *Central Problems in Social Theory. London: Macmillan Press.*

Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structuration, Berkeley: University of California Press.*

Gieryn, T. F. 2002. *What buildings do. Theory and society*

Gifford, R., 2007. *The consequences of living in high-rise buildings. Architectural science review, 50(1), pp.2-17.*

Golton, B.L. 1997. *Building obsolescence and the sustainability agenda. in CIB (Conseil international du bâtiment), Second international conference, Buildings and the Environment, Paris.* Graham, S. 2015. *Luxified skies: How vertical urban housing became an elite preserve. City*

Hall, P., 2014. *Cities of tomorrow: An intellectual history of urban planning and design since 1880. John Wiley & Sons.*

Hillier, B., & Hanson, J. 1989. *The social logic of space. Cambridge university press.*

IWU – Institut für Umwelt und Wohnen. 1990. *Energiesparpotentiale im Gebäudebestand, Darmstadt.*

Jacobs, J. 1961. . *The Death and Life of Great American Cities, 21(1), 13-25.*

Jencks, C. A. 1978. *The language of post-modern architecture. Journal of Aesthetics and Art Criticism, 37(2).*

Joerges, B. 1999. *Do politics have artefacts?. Social studies of science, 29(3), 411-431.*

Kesteloot, C., Loopmans, M., & De Decker, P. 2016. *Space in sociology: an exploration of a difficult conception. In Between the Social and the Spatial (pp. 145-164). Routledge.* Kohler, N., & Hassler, U. 2002. *The building stock as a research object. Building Research & Information, 30(4), 226-236.*

Lascoumes, P., & Le Galès, P. 2007. *Introduction: Understanding public policy through its instruments. From the nature of instruments to the sociology of public policy instrumentation. Governance*

Latour, B. 1997. *Petit leçons de sociologie des sciences*

Lees, L. 2008. *Gentrification and social mixing: towards an inclusive urban renaissance?. Urban studies*

Lelévrier, C., & Melic, T. 2018. *Impoverishment and social fragmentation in housing estates of the Paris region, France. In Housing estates in Europe (pp. 313-338). Springer, Cham.*

Maracchia F. 2005. *Arch. Alessandra Montenero. Conversazione sul quartiere Corviale. L'area periferica romana: i quartieri di edilizia economica e popolare tra il 1965 e il 1985 (pp. 50-54)*

Marinaro, I. C. 2022. *Inhabiting Liminal Spaces: Informalities in Governance, Housing, and Economic Activity in Contemporary Italy. Routledge.*

McCaffree, K. 2018. *A sociological formalization of Searle's social ontology. Journal for the theory of social behaviour.*

Monclús, J. and Díez Medina, C., 2016. *Modernist housing estates in European cities of the Western and Eastern Blocs. Planning Perspectives, 31(4), pp.533-562.*

Mumford, E.P., 2002. *The CIAM discourse on urbanism, 1928-1960. MIT press.*

Newman, O. 1972. *Defensible space. New York: Macmillan.*