Rationalizing Evaluation Legal Models for Affordable Home Ownership and Leasehold Interests in Italy

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Abstract. With reference to the issue of the evaluation of the purchase prices for leasehold properties, in Italy the transfer of properties built as part of regulated housing initiatives is restricted by a series of constraints, the removal of which entails a set of fees to be borne by the housing lessees. This study, starting from an analysis of similar tools applied in other European territorial contexts, provides a methodological approach for estimating these fees while simultaneously considering the framework established by the current regulations, the trends in the residential market, and the inflation dynamics.

Keywords: Social housing · real estate · surface right

1 Introduction

Economic public housing, also known as public or social housing, is a key element in the housing policies of many European countries. This sector aims to provide affordable housing for low- and middle-income groups, thereby contributing to social cohesion and citizens' well-being. The size and the management of public housing vary significantly among European countries. On average, about one-fifth of European households reside in social housing. However, the percentage of social housing within the total stock markedly differs from country to country. For instance, in Italy, public residential housing accounts for approximately 3.5% of the total housing stock, with about 900,000 units managed by public entities and municipalities [1]. Generally, the public housing sector in Europe faces several challenges, including funding shortages, maintenance and management issues, and a growing demand that surpasses the available supply. These problems have been exacerbated by public housing divestment policies initiated in the 1990s, by leading to a steady decrease in available housing.

To address these challenges, the European Union and individual Member States are implementing various strategies. The European Commission, for instance, recognizes the

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housing as a fundamental infrastructure for urban economic growth and citizens' well-being, promoting policies and funding aimed at supporting social and affordable housing [2]. For instance, the affordable housing initiative guides the New European Bauhaus (NEB), which is a policy and funding initiative that makes green transition in built environments enjoyable, attractive and convenient. The core values of the New European Bauhaus are represented by sustainability, aesthetics and inclusiveness, combining the social paradigm with the ecological transition [3].

Analyzing in more detail the interpretation and management of social housing at a European level, there are three common elements across EU Member States in defining social housing: *i) Mission*: considered to be of general interest; *ii) Objective*: to increase supply of affordable housing by constructing, managing or purchasing social housing; *iii) Target:* target groups are defined in terms of socio-economic status or the presence of vulnerabilities. Beyond the aforementioned similarities, there is no common official definition for the term "social housing" across Europe, and not all EU Member States even use this term as exemplified: in Austria the terms either "Limited-Profit Housing" or "People's Housing" are used; in Denmark either "Common Housing" or "Not-for-Profit Housing" are implied; in France "Housing at Moderate Rent"; in Germany "Housing Promotion"; in Spain "Protected Housing"; in Sweden "Public Utility Housing" [4–6].

Beyond semantic differences, social housing policies in Europe vary significantly across the countries, in terms of the diversity of the strategies reflecting different historical, economic, and social approaches. This heterogeneity of policies, together with the peculiarities of the specific context, leads to huge differences in the amounts of social housing built in each country.

2 Aim

With reference to the Italian context, this study aims to explore the transformation of the surface right - obtained as leasehold property - into full ownership for housing units built in Public Economic and Social Housing Plan (PEEP) areas, by comparing the market dynamics with the conventional evaluation principles applied according with the legal appraisal. Specifically, the regulations allowing this transformation introduce a series of coefficients (hereinafter defined as $\alpha = 0.6$ and $\beta = 0.5$), without providing any explanation of how they are determined.

This study seeks to offer a guideline for determining these coefficients through a compensatory approach [7] that takes into account the evolution of the property market, the financial investment trends, and the inflation index variations. The objective of the proposed approach is to neutralize the initial advantages granted to leaseholders of housing units built in PEEP areas, by considering the evolution of the property market and the broader economy from the date of the housing assignment (i.e. starting date of the leasehold) to the date of transformation of the surface right into full ownership. The proposed approach aims to achieve greater equity in the determination of these coefficients, by incorporating the specificities of the local contexts in which interventions are carried out.

The work is organized as follows. In Sect. 3 an overview of affordable housing regulations in the European and Italian context is framed. In Sect. 4 the method for

the appropriate evaluation of the coefficients to be applied in the legal formula for the transformation of the surface right in full ownership is illustrated. In Sect. 5 the conclusions of the work are drawn.

3 Economic and Social Housing in Italy: History and Main Tools

From the outlined framework, it emerges that social housing develops across Europe according to heterogeneous models that reflect different national contexts, although common factors persist. In the Italian context, social housing has its roots in the early twentieth century, when the State and housing cooperatives began constructing dwellings for the working class. During the Fascist period (1922–1943), popular neighborhoods were built to improve the housing conditions of the lower-income population. After World War II, Italy faced a housing crisis due to accelerated urbanization and post-war reconstruction, which led to a significant increase in housing demand. Due to the scarcity of affordable housing, the Italian government developed housing policies aimed at constructing homes for low-income social groups. Specifically, Law No. 167 of April 18, 1962 (amended and integrated by Laws No. 904 of July 21, 1965, and No. 865 of October 22, 1971) introduced the establishment of the Economic and Popular Housing Plans (PEEP) [8–10]. These plans regulated the zoning of areas designated for the construction of affordable or public housing, as well as related infrastructure and social services, including green spaces. For the first time the law made expropriation for public utility useable for these areas, establishing a monetary compensation lower than the market value, set at the areas' value on the market two years before the adoption of the PEEP plan. The intention was to allow municipalities, IACP (Public Housing Institutes), and social housing developers—who could be allocated the buildable land—to purchase more central areas at a relatively low cost and equip them with all the necessary social services, which had to be included in the same zoning plan.

In the following years, Article 35 of Law No. 865 of October 22, 1971, regulated the allocation of these areas, providing for two distinct regimes: full ownership transfer, which permanently transferred the land to private individuals, and surface rights, which allowed beneficiaries (leaseholders) to construct and own the buildings while the public entity retained the ownership of the land for a period ranging from 60 to 99 years [9]. In Italy, the surface right remains one of the most widely used legal tools in urban planning and public housing projects.

Within economic and popular housing, land granted under surface rights is generally assigned by the Municipality to specific cooperatives or construction companies for a fixed period (60 to 99 years) [10]. These companies and cooperatives, after constructing the buildings, transfer the leasehold right of the housing units at subsidized prices to individuals who satisfy specific income requirements.

Articles 952–956 of the Italian Civil Code regulate the surface right, defined as a legal institution allowing an individual (the "*superficiary*") to build, maintain, and use a structure on land owned by another entity (the "*landowner*") [11]. This legal tool creates a clear distinction between *the grantor*, who owns the land, and *the grantee*, who holds the surface rights. The grantee does not own the land but is permitted to use superficial property for economic purposes.

The surface right can be established through: *i)* contract, either for consideration or free of charge. If for consideration, payment can be made in a lump sum or through periodic installments, such as an annual concession fee; *ii)* will (testamentary disposition); *iii)* adverse possession (usucapion), upon recognized legal requirements.

In the following years, Article 31 of Law No. 448 of December 23, 1998, introduced the possibility for municipalities to transfer full ownership of land included in PEEP areas that had been previously granted under surface rights [12]. The transformation of surface rights into full ownership allows housing assignees to purchase the land on which their housing units are built.

This process takes place following a proposal from the municipality and the acceptance of individual housing assignees, in exchange for payment determined according to the Law No. 448/1998 and formalized through a public deed [12]. The amount to be paid is calculated based on a conventional method established by Law No. 448/1998 [12]. However, this valuation process does not always adequately reflect the actual market conditions of the specific area, which can lead to significant disparities in treatment depending on the context in which the land is located. Moreover, while the aspects related to the specificities of the surface right from a legal perspective and its transfer have been extensively addressed [13], the purely evaluative aspects have been less explored [14, 15], probably because they fall within the scope of the "legal" appraisal [16].

4 Method

The development of affordable and public housing in Italy, supported by the legislative framework established by the PEEP law, essentially provided that the municipal administration would expropriate land from private owners and transfer it to cooperatives, which were responsible for the actual construction of the housing units. These units were subsequently assigned to beneficiaries (often cooperative members), individuals with specific income and asset requirements that made access to the free housing market more difficult.

The land designated for the development of affordable and public housing was allocated by the municipality to concessionaires, with 60% granted under a surface right (meaning the municipality retained ownership of the land) and the remaining 40% transferred as full ownership.

This distinction led to different restrictions on the housing units, particularly regarding their sales. For both types of housing, there were time-based restrictions on the transfer of the corresponding property rights (especially if potential buyers did not satisfy certain income or asset criteria) and a prohibition on selling above the maximum allowable price. In addition to these restrictions, housing units with the surface right were subject to an additional constraint: according to the agreements between the municipality and the leaseholders, upon expiration of the concession period (typically 99 years), the surface right would be extinguished, and the landowner - the municipality - would become the owner of the building. Alternatively, there was an option to renew the leasehold for a maximum of another 99 years, subject to the payment of a fee.

Over the years, the legislator has introduced a series of regulations aimed at facilitating the removal of the restriction related to the maximum sale price, allowing housing

units to be bought and sold at market prices, as well as the transformation of the surface right into full ownership. Given the advantages originally granted to the initial leaseholders, the legislator has established monetary amounts that those wishing to remove these restrictions must pay to the administration for their elimination.

The current regulatory framework, specifically Law No. 448 of December 23, 1998 – Public Finance Measures for Stabilization and Development (as amended by Law No. 108/2021 and Decree-Law No. 21/2022) [17], states that the transformation of the surface right into full ownership occurs upon payment of a fee ($C_{c.\,48}$) determined through Eq. (1):

$$C_{c.48} = (60\% \cdot MV_{area} - C_o) \tag{1}$$

where

- MV_{area} is the market value of the asset, that is, the market value of the buildable land at the date of the transfer agreement;
- C_o are the charges for granting the surface right, revalued based on the variation in the consumer price index for blue- and white-collar households (ISTAT-FOI), as determined by the Italian National Institute of Statistics (ISTAT) [18], occurring between the month in which these charges were paid and the month in which the land transfer agreement is executed.

The removal of the restriction on the maximum sale price, as defined by Decree No. 151 of September 28, 2020 – Regulation on the removal of price constraints affecting properties built under the regulated housing scheme [19], establishes that the fee for the removal of maximum sale price restrictions (CRV) is determined through Eq. (2):

$$CRV = C_{c.48} \cdot Q_M \cdot 0.5 \frac{(ADC - ATC)}{ADC} \tag{2}$$

where

- Q_M is the millesimal share of the property unit;
- ADC is the number of years of the duration of the agreement;
- ATC is the number of years, or fraction thereof, that have passed from the agreement until the maximum duration of the agreement.

In the case of an agreement concerning the transfer of the surface right with a duration between 60 and 99 years, Eq. (2) becomes:

$$CRVs = CRV \cdot 0.5$$

In this study, the rationale behind these fees and the coefficients is questioned, in relation to the evolution of the property market and the trend of inflation.

The amount of fees paid by leaseholders to the municipal administration should be equal to the expropriation compensation paid to the original property owners, i.e. an amount that, over the last 50 years, has undergone significant changes due to numerous appeals and rulings by the Court of Cassation [20]. Currently, the compensation is equal to the market value of the expropriated buildable area, potentially reduced by 25% when

the expropriation is aimed at implementing socio-economic reform interventions [21]. This amount should be distributed based on the percentages of the surface right and full ownership, as well as the market value differences between the housing units.

The market value of a property with the surface right, in the absence of specific legal provisions which were not present at the time this right was established, is equal to the initial accumulation of constant, deferred, and limited annual amounts, corresponding to the rental fees. Similarly, the market value of a property with full ownership, determined through the income capitalization method, is equal to the ratio between the annual amounts and the capitalization rate (Eq. (3)):

$$\Delta MV = \frac{MV_{SUP,M} - MV_{PRO,M}}{MV_{PRO,M}} = \left(a\frac{q^n - 1}{q^n r} - \frac{a}{r}\right)\frac{r}{a} = r\frac{q^n - 1}{q^n r} - 1 \tag{3}$$

where:

- $MV_{SUP,M}$ is the market value of the property with the surface right at the date of signing the concession;
- $MV_{PRO,M}$ is the market value of the property with full ownership at the date of signing the concession;
- a is the annual rent;
- r is the interest rate equal to the capitalization rate;
- $q = 1 + r$ is the unit amount;
- $n = ADC - ATC$ is the remaining duration of the concession.

In the absence of data related to the different charges paid by owners of the property/surface right, the proposed approach assumes that the difference in value is established according to the logic borrowed from financial mathematics. Therefore, given the charges O paid by the leaseholder to the municipality (function of the expropriation compensation), hypothesizing that the difference in charges borne by the leasehold and by the landlord is on the basis of the difference in value and considering the different percentage distribution of the areas, Eq. (4) can be obtained:

$$\begin{cases} 60\% \cdot O_{SUP} + 40\% \cdot O_{PRO} = O \\ \frac{O_{SUP} - O_{PRO}}{O_{PRO}} = \Delta MV \end{cases} \tag{4}$$

in which:

- O_{SUP} are the charges borne by the leaseholder;
- O_{PRO} are the charges borne by the landlord.

From the second formula of Eq.(4):

$$O_{SUP} - O_{PRO} = O_{PRO} \cdot \Delta MV \Rightarrow O_{SUP} = O_{PRO} \cdot (1 + \Delta MV)$$

which replaced in the first one in Eq. (4) allows to obtain O_{PRO}:

$$60\% \cdot O_{PRO} \cdot (1 + \Delta MV) + 40\% \cdot O_{PRO} = O \Rightarrow O_{PRO} = \frac{O}{1 + 60\% \cdot \Delta MV}$$

$$\text{Valid if } 1 + 60\% \cdot \Delta MV \neq 0.$$

Consequently, O_{SUP} is equal to Eq. (5):

$$O_{SUP} = \frac{O}{1 + 60\% \Delta MV} \cdot (1 + \Delta MV) \tag{5}$$

According to the current regulatory provisions, the market value of full-owned housing units is, therefore, equal to the difference between the market value of similar properties (MV) and the fee for the removal of the maximum transfer price constraints, whereas for those with surface rights, the consideration for the transformation of the institution into full ownership right should also be deducted from the previous formula, i.e.:

$$MV_{PRO} = MV - CRV$$

$$MV_{SUP} = MV - CRVs - C_{c.48}$$

In the outlined framework, the question arises as to whether, in light of the ISTAT-FOI index [18] trend and the property market, the approach given by the law is fair and does not penalise or facilitate the assignees of housing with surface rights compared to those of housing in full ownership and to the residential real estate market dynamics.

Starting from average data provided by Scenari Immobiliari [22], the graph in Fig. 1 hypothesizes, with reference to the saleable gross surface unit of the accommodation and through a series of assumptions useful for determining the introduced parameters, the trend in nominal values for the entire duration of the concession, of the market value (MV), of the average value of properties transferred in ownership (MV_{PRO}), of the value of accommodations with surface rights calculated according to market logic ($MV_{SUP,M}$) and according to the current legislation (MV_{SUP}).

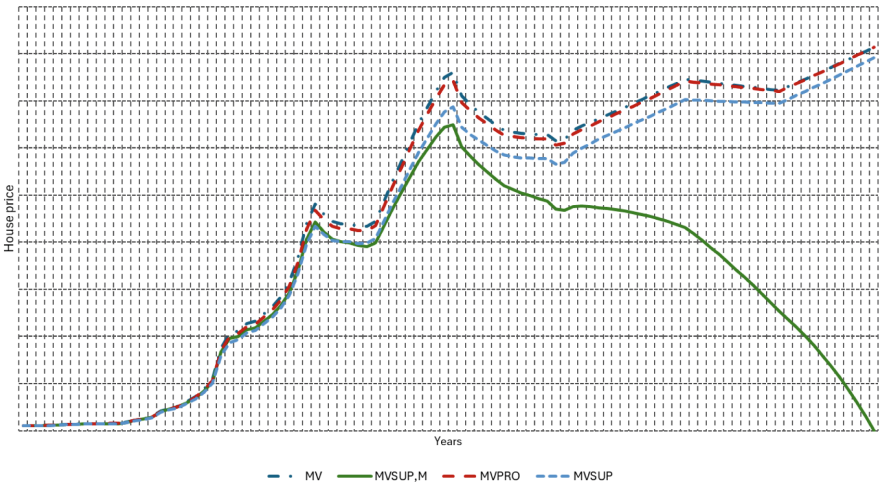

Fig. 1. Hypotheses about the trend of MV, MV_{PRO}, $MV_{SUP,M}$ and MV_{SUP}.

In Fig. 1 the hypotheses about the trend of MV, MV_{PRO}, $MV_{SUP,M}$ e MV_{SUP} are reported.

The prevailing behavior, in line with expectations, is:

$$MV > MV_{PRO} > MV_{SUP} > MV_{SUP,M}$$

Over time MV_{PRO} tends to MV up to be equal at the end of the $(ADC = ATC)$, since :

$$MV_{PRO} = MV - CRV = MV - C_{c.48} \cdot Q_M \cdot 0.5 \cdot \frac{(ADC - ATC)}{ADC} = MV - C_{c.48} \cdot Q_M \cdot 0.5 \cdot \frac{(ADC - ADC)}{ADC} = MV$$

The trend of MV_{SUP} is negatively influenced by the growth of real estate market values and positively by the increase in the ISTAT-FOI index [18] and the passing of the years, whereas $MV_{SUP,M}$ will be equal to 0 at the end of the concession.

Returning to the defined question, the limitations imposed on the transfer of properties were generated by the benefits recognized to the assignees deriving from a subsidized price paid for the areas.

Three alternative scenarios are assumed: *i)* purchase of the property at the market value; *ii)* assignment of the housing in ownership with the benefits and consequent limits recognized in the cases of the social and affordable housing and following investment of the "saved" amount in a "safe" investment (e.g. postal savings certificates, government bonds, etc.) at a compound interest rate i and *iii)* assignment of the housing in surface right and following investment as the previous case (*ii*).

The fees introduced by the current regulations (CRV, $CRVs$ e $C_{c.48}$) which remove the initial advantage for the assignees should be identified.

Therefore:

$$\begin{cases} \left(MV_{area,0} - O_{PRO}\right)(1+i)^n = CRV \\ \left(MV_{area,0} - O_{SUP}\right)(1+i)^n = CRVs + C_{c.48} \end{cases} \tag{6}$$

The two terms on the left in Eq. (6) represent the monetary relief recognized to the assignees (in full ownership and with surface rights) with respect to market values, whereas, the two terms on the right in Eq. (6) constitute the relative fees as defined by the law.

Rewriting the fees of the law referred to the property unit of saleable gross surface and generalizing the introduced coefficients, the following relationships are obtained:

$$C_{c.48} = (\alpha \cdot MV_{area} - C_o)$$

$$CRV = \beta \cdot C_{c.48} \frac{(ADC - ATC)}{ADC}$$

$$CRVs = \beta \cdot CRV$$

Replacing the first equation into the second one and the second into the third:

$$CRV = \beta(\alpha \cdot MV_{area} - C_o) \frac{(ADC - ATC)}{ADC}$$

$$CRVs = \beta^2(\alpha \cdot MV_{area} - C_o)\frac{(ADC - ATC)}{ADC}$$

$$\begin{cases} \left(MV_{area,0} - O_{PRO}\right)(1+i)^n = \beta(\alpha \cdot MV_{area} - C_o)\frac{(ADC-ATC)}{ADC} \\ \left(MV_{area,0} - O_{SUP}\right)(1+i)^n = (\alpha \cdot MV_{area} - C_o)\left[\beta^2\frac{(ADC-ATC)}{ADC} + 1\right] \end{cases}$$

For greater representation easiness:

$$(1+i) = p$$

$$\frac{(ADC - ATC)}{ADC} = A$$

Therefore, the previous system becomes Eq. (7):

$$\begin{cases} \left(MV_{area,0} - O_{PRO}\right)p^n = \beta(\alpha \cdot MV_{area} - C_o)A \\ \left(MV_{area,0} - O_{SUP}\right)p^n = (\alpha \cdot MV_{area} - C_o)\left(\beta^2 \cdot A + 1\right) \end{cases} \tag{7}$$

Thus, an auxiliary variable is defined:

$$X = \left(\alpha \cdot MV_{area,0} - C_o\right)$$

and Eq. (7) can be rewritten according to Eq. (8):

$$\begin{cases} \left(MV_{area,0} - O_{PRO}\right)p^n = \beta \cdot X \cdot A \\ \left(MV_{area,0} - O_{SUP}\right)p^n = X\left(\beta^2 \cdot A + 1\right) \end{cases} \tag{8}$$

From the first expression of Eq. (8), X is obtained:

$$X = \frac{\left(MV_{area,0} - O_{PRO}\right)p^n}{\beta \cdot A}$$

This relationship can be replaced into the second expression of Eq. (8):

$$\left(MV_{area,0} - O_{SUP}\right)p^n = \frac{\left(MV_{area,0} - O_{PRO}\right)p^n}{\beta \cdot A}\left(\beta^2 \cdot A + 1\right)$$

By multiplying both equation members by $\beta \cdot A$:

$$\left(MV_{area,0} - O_{SUP}\right)p^n \cdot \beta \cdot A = \left(MV_{area,0} - O_{PRO}\right)p^n\left(\beta^2 \cdot A + 1\right)$$

Hence, the right-hand side of the equation can be developed:

$$\left(MV_{area,0} - O_{SUP}\right)p^n \cdot \beta \cdot A = \left(MV_{area,0} - O_{PRO}\right)p^n \cdot \beta^2 \cdot A + \left(MV_{area,0} - O_{PRO}\right)p^n$$

After moving on the left side of the equation the right part of the formula, the division by $p^n \neq 0$ and by $A \neq 0$ can be carried out:

$$\left(MV_{area,0} - O_{PRO}\right)\beta^2 - \left(MV_{area,0} - O_{SUP}\right)\beta + \frac{\left(MV_{area,0} - O_{PRO}\right)}{A} = 0$$

Thus, a quadratic equation in the form of $a \cdot \beta^2 + b \cdot \beta + c = 0$ is obtained, in which:

$$a = \left(MV_{area,0} - O_{PRO}\right)$$

$$b = -\left(MV_{area,0} - O_{SUP}\right)$$

$$c = \frac{\left(MV_{area,0} - O_{PRO}\right)}{A}$$

Whose resolution is:

$$\beta_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

After determining β, X and consequently α , can be determined:

$$X = \frac{\left(MV_{area,0} - O_{PRO}\right)p^n}{\beta A}$$

$$X = \left(\alpha \cdot MV_{area,0} - C_o\right) \Longrightarrow \alpha = \frac{X + C_o}{MV_{area,0}}$$

In this way, consistently with the formal structure introduced by the current legislation concerning the elimination of the constraints related to the maximum transfer price and the transformation of the surface right into full ownership, the coefficients α and β that allow to remove the initial monetary advantage recognized to the assignees in light of the evolution of the residential property market and the trend of inflation, are determined.

5 Conclusions

The social and affordable housing interventions that have been implemented in Italy since the 1970s through the PEEP plans have imposed a series of limitations on the transfer of the housing units, in accordance with the concessions granted to the assignees of such properties [23]. The main restrictions concern the maximum selling price (so-called maximum transfer price) and the presence, for some of these housing, of the surface right of instead of the ownership one.

Over the years, the need to remove such constraints has arisen in order to allow the assignees to fully dispose of the housing and to be able to place it on the free market. The legislator has intervened on several occasions in determining the contributions aimed at deleting the aforementioned constraints, through a series of expressions that do not adequately consider the context in which the properties are located, i.e. the trend of the residential property market, and the overall trend of the purchasing power of the population, measured by the inflation.

In the present research, while maintaining the formal structure of the equations included in the current legislation for the removal of such constraints, a methodological approach that also considers the trend of the property market and the ISTAT-FOI index has been proposed. The developed approach aims to ensure a fair tool that at the same

time: *i)* takes into account the local specificities of the context in which the properties are located; *ii)* considers the evolution of recorded inflation; *iii)* compensates for the advantage of the housing assignees compared to those who purchased at market prices. The approach assumes that, in light of economic developments, the initial conditions (in terms of income and assets) that had guaranteed the assignees access to affordable and social housing are no longer valid. Future developments of the present research could involve the inclusion of additional elements that also take into account the income of the assignees at the date of removal of the aforementioned constraints. Furthermore, by applying the proposed approach to a series of case studies related to different Italian cities, it would be possible to evaluate the size of the coefficients to be applied in the legal formula and propose an abacus valid on a national scale. In this way, the objective is to generate a coefficients map that highlights the local specificities, thereby eliminating potential inequities arising from the use of context-independent coefficients.

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