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Gentrification and the real estate market: what can we learn from the rent gap theory?

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4.1 Introduction

Real estate contributes to inequality mechanisms in two ways. Firstly, it has been known since the seminal work of Halbwachs (1913) that housing-related household expenses (whether they are tenants, first-time buyers or owners), vary greatly according to social category. This first, static, unequal dimension interacts strongly with the second, which is more of a dynamic approach. Real estate plays a central role in the constitution of assets, which it helps to differentiate according to several dimensions: value and number of properties owned, rental income generated, etc. Very roughly speaking, not only will a homeowner's housing-related expenses be much lower than that of a renter's or homebuyer's, but a multi-owner household will even be able to make its real estate capital grow by renting it out or by recouping capital gains when it is resold.

The central role played by real estate in inequality, recently recalled by the resounding work of Piketty (2013), explains why it has been structurally at the heart of the critical tradition of social sciences. Since the founding studies of Engels (1872/2012), a number of works have thus emphasized the central role of real estate in the production and reproduction of inequalities, regardless of the preferred approaches (housing-related household expenses, substandard housing, neighborhood effects and social trajectories, property wealth inequalities, etc.). Quite logically, these studies have also focused on the role of public policies in mitigating or aggravating these inequalities related to real estate. In particular, it has been shown to what extent management of the housing issue was central to the differentiation of national models of capitalist regulation (Kemeny 2013, Aveline-Dubach 2020, Schwartz Seabrooke 2009). On finer scales, there is a long list of works by geographers, but also by sociologists and political scientists, which link development operations, the real estate market and social inequalities (cf. chapter 5), notably through the notion of gentrification.

It is in this problematic context that the rent gap theory, proposed in 1979 by a young student of David Harvey, appears. "Toward a Theory of Gentrification. A Back to the City Movement by Capital, not People": from its very first formulation, the theory of Neil Smith (1954-2012) explicitly links gentrification to economic circuits and the real estate market (Smith 1979). This article contains the essence of one of the key debates in urban geography and sociology at the end of the 20th century: by making social changes in urban centers the result of investment flows constrained by macroeconomic parameters, Smith has two targets in mind. They are clearly apparent in the subtitle of his founding article: the cultural explanation of gentrification on the one hand, and its justification by the rationality of individual location choices on the other¹. These two entries are discounted by Smith in favor of

¹ Two positions between which Smith rightly sees convergences: "These conventional hypotheses are by no means mutually exclusive. They are often invoked jointly and share in one vital respect a common perspective - an emphasis on consumer

a neo-Marxist approach, as suggested by the use of the term ‘capital’ in the subtitle, decidedly full of keywords, of the 1979 article.

The intense controversy of the 1990s concerning gentrification was not mistaken. Proponents of the rent gap theory were confronted mainly on two fronts: a challenge to the notion of rent by standard urban economics (mainly under the leadership of S. Bourassa (1993)) and a critique of economism by cultural sociology, which is more methodologically individualistic (Ley 1987). Although vigorous, of good quality and not definitively settled, these debates soon gave way to a general use of the notion of the rent gap, finally rid of all its sulfurous theoretical vehemence. In recent years, references to the rent gap have become more and more numerous in the literature, and have concerned increasingly varied fields and issues (Table 4.1). It is reasonable to hypothesize that the global housing boom of the 2000s is not unrelated to the issue, just as the development of rental platforms and the privatization of urban planning instruments must have encouraged the perpetuation of the rent gap in the academic literature of the 2010s.

This academic success is not without its problems: initially a theoretical hypothesis, the rent gap is increasingly reduced to a simple phenomenon – for example, a localized price increase, a type of urban fabric or a discontinuity in urban settlements. Without incriminating an entire research movement, we feel it is important to stress that this reduction goes hand in hand with an imbalance in the theoretical corpus mobilized. Initially situated at the confluence of real estate and socio-demographic issues, the rent gap hypothesis has been much more firmly rooted in the gentrification corpus than in the real estate and property studies corpus for the past twenty years². However, at a time when capital is so abundantly available on the world's financial markets that it has profound territorial as well as theoretical impacts³ (Boulay 2019), it seems particularly important to us to reassess the conditions for using the rent gap: recognizing the benefit of the rent gap concept implies advocating for its reasoned and justified use. In view of its academic success and its widespread application, we insist on the fact that a critical reflection on the concrete modalities of its quantification and testing can only lead to the conclusion that cases of rent gaps cannot be anything other than one consequence among others of the influx of capital on the current dynamics of city production. This reintegration of the rent gap hypothesis into contemporary work in urban political economy would also make it possible to amend some of its shortcomings, which were already pointed out in the 1990s and are undoubtedly at the root of a paradox: while the subprime crisis and financialization brought work on socio-economic inequalities linked to real estate back to the forefront, the rent gap theory was largely ignored in the specialized literature of the 2000s and 2010s.

We will show how the rent gap theory was a reaction to the irruption of gentrification in the 1970s and 1980s (section 4.2). We will see then that its elegant graphic formalization favored its success while leaving aside the thorny question of its characterization and quantification (section 4.3). Finally, it will be shown that these difficulties in concretely testing the rent gap hypothesis reveal certain weaknesses and its necessarily limited nature (section 4.4), before discussing the place of rent gap theory in the geography of real estate (section 4.5).

preference and the constraints within which these preferences are implemented. This they share with the broader body of neoclassical residential land use theory" (Smith, 1979, p. 539).

2 While Smith himself obviously made gentrification a by-product of economic circuits: "Gentrification has been the leading residential and recreational edge (but in no way the cause) of a larger restructuring of space" (Smith, 1996: 68).

3 For the past twenty years, and despite the crisis of 2008-2013, the availability of capital has been unprecedented on a global scale. However, a significant part of this capital is valued in the urban environment (commercial and office real estate, but also residential, infrastructure and urban facilities, etc.), which generates important modifications of urban forms (densification and rehabilitation of centers, urban sprawl, standardization of architectural typologies, etc.) and of the social division of space (increase in the cost of housing, segregation, privatization of space, etc.). The balance of power within the discipline has also been affected: through the study of subjects such as financialization, real estate markets, or the managerial and austere turn of planning policies, economic geography has regained visibility.

4.2 What theoretical basis for thinking about gentrification?

4.2.1 Gentrification, epiphenomenon or structural evolution?

To raise the question of the structural nature of gentrification may be surprising nowadays, especially in Europe. But this would be to forget the almost naturalized importance of filtering models in North American representations of the city. Derived from the models of the Chicago school of urban ecology and then strongly developed by Hoyt and other urban economists, these models are based on a typical sequence: new neighborhoods are built for the wealthy classes, who gradually abandon them when they deteriorate, thus leaving these aging homes available for more modest classes. The sequence is repeated as urban growth proceeds, gradually pushing the wealthier populations out of the city, and promoting the impoverishment of central and inner city neighborhoods. Assuming a certain inevitability of building obsolescence and based on a preference for space (and therefore for exurbanization), these models do not foresee a reversal of the residential logics of rich households.

In light of these models, we can see how incongruous gentrification seemed in the last quarter of the twentieth century in North America, which was marked by suburbanization and white flight: "gentrification has posed a major challenge to the traditional theories of residential location and urban social structure. Neighbourhood change was viewed by Hoyt and Burgess as a one-way process where 'the wealthy seldom reverse their stops and move backwards into the obsolete housing which they are giving up' (Hoyt 1939)" ((Hamnett 1991), (Hamnett 1991): 173). From the end of the 1970s to the mid-1990s, many articles have thus been marked by "surprise", even "skepticism" (Wyly Hammel 1999), in the face of this subversion of a well-established socio-spatial order. For these "minimalists" – as they were called at the time – gentrification could only be a cyclical phenomenon, and almost random in its location. B. Berry, himself a minimalist, summarized this position in the title of a famous article: "Islands of renewal in seas of decay" (Berry 1985). The minimalists are faithful to the filtering models mentioned by C. Hamnett: far from calling into question the preference for space, gentrification is merely a cyclical response to market disruption factors (in particular, the rising cost of fuel – which makes commuting more expensive – and the rising cost of construction – which may make it preferable to renovate an old dwelling rather than build a new one). At most, Berry would recognize many years later that gentrified niches exist in most large U.S. cities, but he did not bet on their viability (Berry 1999).

It is therefore easy to imagine the noise made by Smith's seminal article, which, as early as 1979, took the position that gentrification was a structural evolution, not an epiphenomenon. While the rent gap thesis rallied many supporters from the end of the 1980s, the first to support Smith in this "structuralist" position – as it was then called⁴ – were sociologists who did not share his neo-Marxist theoretical positions. Beyond its internal dissensions between supporters of demand-side explanation and supporters of supply-side explanation, the "structuralist" position fully prevailed at the end of the 1990s: E. Wyly and D. Hammel then allowed themselves to thumb their noses at B. Berry by entitling their article "Islands of decay in seas of renewal" (Wyly Hammel 1999).

4.2.2 Preferences and methodological individualism: "demand-side explanations" of gentrification

It was undoubtedly D. Ley who was the first to make gentrification a central object of urban sociology. Even before N. Smith's seminal article (Ley 1978), the Canadian sociologist applied to cities the idea of the "post-industrial" turn of societies, highlighted shortly before by D. Bell (Bell 1976). He sees gentrification as "a result of the changed industrial structure of major cities from manufacturing industries to service-based industries" (Van der Land *et al.* 2012). This "professionalization" movement as it is called in the literature (Atkinson 2012) results in "fractions of the (new/cultural) middle class preferring to live in the inner city rather than in suburbs, because they want to live close to work, a socially and culturally diverse area, and near amenity and leisure opportunities" (Van der Land *et al.* 2012)(cf. Chapter 5). This "classic" model of gentrification (*ibid.*) emphasizes the different

4 The term refers to the structural nature of gentrification – as opposed to its reduction to a short-term phenomenon – and not to the mainstream theoretical and methodological holism of the Humanities and Social Sciences of the 1950s to 1970s.

stages of gentrification, which nurture a continuous progression in the socioeconomic level of new residents (Zukin 1987), (Munt 1987). The pioneers of gentrification (artists, squatters, intellectuals, etc.), driven above all by aesthetic sentiment and cultural capital, are succeeded by populations with more economic capital (executives from the private sector, the financial sector or management in particular), and even "super-gentrifiers" (Butler Lees 2006) in certain districts of world cities where the pied-à-terres of international elites is multiplying. Most of the numerous studies that have looked at the dynamics of non-urban gentrification have also been based on this approach, which combines post-industrial change with individual location preferences (Darling 2005). From the early 2000s onwards, the "post-productivist migration patterns" (McCarthy 2008) in all their variety prompted a number of authors to work on the regional and local impacts of this vast redistribution of income, particularly in terms of housing: real estate revaluation, rehabilitation of buildings, reallocation of premises to new activities, etc.

It is this emphasis on individual location choices that links this work to "demand theories". In a world where white-collar workers prevail over blue-collar workers, "the values of consumption rather than production guide central city land use decisions" (Ley 1978), cited by (Smith 1996). In a famous book, T. Butler and G. Robson even go so far as to consider gentrification as "the ultimate expression of consumption", in that it distinguishes gentrifiers from other middle-class households who buy standardized housing produced by developers and builders (Butler Robson 2003). It is no coincidence, moreover, that many studies inspired by the post-industrial redistribution of populations and their incomes have given a central place to the consumption of the "creative classes" (Florida 2005) in the "resurgence" of large cities, which are increasingly thought of "as places of consumption, not production" (Glaeser Gottlieb 2006). The research themes of A. Markusen are very enlightening in this respect: theorizing a "consumption-based economy" (Markusen 2007) and work on the creative class (Markusen Schrock 2006) are combined.

4.2.3 Capital switching and the built environment: "supply-side explanations" of gentrifications"

Although they recognize the structural character of gentrification as he does, Smith is no more convinced by these culturalist explanations of gentrification than he was by the exogenous and minimalist explanations of Berry and other so-called standard⁵ thinkers. He rightly believes that they are joined "by a common perspective: an emphasis on consumer preference and constraints within which these preferences are implemented" (Smith 1996: 50). He also counters the microeconomic thesis of a "back to the city" with an important fact: the vast majority of gentrifiers do not come from the suburbs, and it is therefore not possible to put forward the idea of a simple disruption of the filtering models. To the culturalist theses – among which he considers Ley's to be far superior to the others (*ibid.*) – he opposes another argument: cultural preferences, which are relatively steady and dependent upon historical and geographical contexts, cannot change simultaneously in North America, Australia and Western Europe, all of which are experiencing gentrification (*ibid.*).

In contrast to these theories based on consumer preferences ("demand"), Smith develops a framework for interpreting gentrification based on the urbanization of capital ("supply"). The title of one of D. Harvey's major books (Harvey Harvey 1985) deliberately reused here, since the rent gap hypothesis is explicitly based on the writings of the Johns-Hopkins geographer⁶. More concretely, Smith relies on Harvey's model of capital flows (Harvey 2006). According to the latter, "there are (...) several circuits of capital (the first corresponding to the production of consumer goods, the second to the built environment and the third to social reproduction) which communicate according to the accumulation cycles. When the primary circuit shows signs of overaccumulation, some of its capital is redirected to the secondary circuit, in order to benefit from new demand and to guarantee a minimum rate of profit" (Boulay 2019). According to Harvey, this phenomenon of capital switching is necessarily accompanied by the anchoring of new capital at a new location. Playing on the double meaning of *to fix*, Harvey refers to this solution of restoring the rate of profit as spatial fix, indissolubly linked to the production of a new

⁵ In economics, a position compatible with the basic assumptions of neo-classical economics is called "standard". Even if the latter have evolved considerably between their initial formalization in the last third of the 19th century and the current theoretical framework, which owes a great deal to theoretical innovations in the 1970s, they still share a common foundation, notably around methodological individualism and the normativity of their proposals.

⁶ The title of Smith's second article on the subject leaves no doubt on this point: "Gentrification and uneven development" (Smith, 1982).

type of space⁷ (for example, capital withdrawn from industry and reinvested in real estate will result in the creation of a new neighborhood, located somewhere other than the old industrial sites).

Smith therefore interprets the "back to the city movement by capital, not people" (Smith 1979) as a typical example of capital switching: "when economic growth is hindered elsewhere in the economy, or where profit rates are low, the built environment becomes a target for the switching of much profitable investment" (Smith 1996: 56). Gentrification is thus indeed the local effect of the macroeconomic availability of capital⁸ – the "supply side. It also means that gentrification is just one form of spatial fix. No doubt with the idea of undermining the ahistorical arguments of filtering models, Smith himself compares it to suburbanization: the same macroeconomic cause can therefore produce diametrically opposed urban effects (Smith 1982; 1996).

It seems crucial to us to emphasize these macroeconomic conditions of the rent gap hypothesis before presenting the graphical formalization that has made it so successful. First, because, of the two levels of Smith's hypothesis (macroeconomic conditions of possibility, local filling of a rent gap), we often tend to retain only the second – although it is determined by the first. And secondly, because while appealing in principle, calls to reconcile "demand-side theories" and "supply-side theories" should not underestimate the magnitude of the task. As one author himself points out in his attempt to unify supply- and demand-side explanations, these two positions refer to the debate between "structure and agency" (Hamnett 1991). This is an absolutely central and perennial theoretical issue for the social sciences: largely inherited from the debates of modern philosophy on free will, this problem in fact refers to the question of knowing who, individuals or social structures, determines the other. The proponents of agency insist on the capacity of individuals to abstain from social constraints in order to act freely, while their opponents emphasize the extent to which social structures limit the freedom or choices of individuals, without them necessarily realizing it.

4.3. Apparent simplicity leads to great success

4.3.1 An elegant graphic formalization

It is through the process of depreciation of capital invested in the urban environment that Smith operationalizes Harvey's model of capital circulation at the local level. This process of devaluation is linked to the inertia of the built environment, which is itself structurally linked to three constraints: the planning power represented by the "near-monopoly" of private property⁹, the immobility of real estate investments¹⁰ and their very long depreciation period (Smith 1996). Schematically, Smith distinguishes three stages in the devaluation process. Immediately after the construction of a building, its value may increase slightly if the neighborhood is under construction (by capitalization of the last developments). Fairly quickly – and not necessarily in all neighborhoods – some buildings will begin to deteriorate, prompting some owners to move their capital to safer neighborhoods. The owner-occupiers, attentive to the market value of their property (i.e. the value at which it would be exchanged on the market if it were put up for sale under normal conditions) will then be replaced by landlords, who are more attentive to the rental profitability (the level of which does not depend on the market value of the property, as a deteriorated property of low value can be rented at a high price). To maintain this profitability, they will tend to

7 This is Harvey's great criticism of Marx, which he believes justifies geography: Marx did not understand that capitalism needed the production of new spaces as much as it needed gains in productivity in order to continue to grow.

8 "Gentrification is a structural product of the land and housing markets" (Smith, 1996, p. 67). This position is fundamental for Smith: in the tug-of-war between him and Ley (Ley, 1986, Smith, 1987, Ley, 1987), who sees gentrification only as "[a] change in household social status," he argues that "[t]he crucial point about gentrification is that it involves not only a social change but also, at the neighborhood scale, a physical change in the housing stock and an economic change in the land and housing markets," adding that "census tracts experiencing increases in education and employment status may do so for a host of reasons quite unconnected with gentrification, and conversely tracts that are experiencing rapid gentrification may not register exceptional increases in these indicators" (p. 463).

9 Although public authorities can sometimes restrict land use (zoning, easements, density ceilings, etc.) or constrain land and real estate transactions (eminent domain, preemptive right, etc.), they do not intervene much and allow the built environment and its uses to remain permanent.

10 The remark may seem trivial, but the specificity of a real estate asset compared to securities is... its immobility, i.e. its lower liquidity.

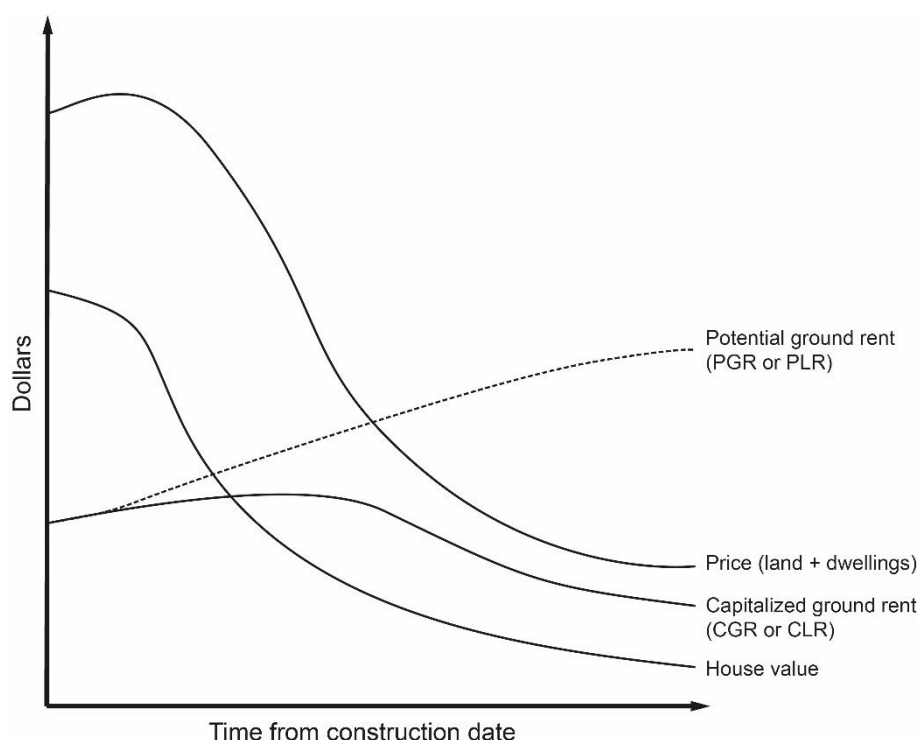
maintain the property less, eventually triggering the last phase of the devaluation process. This last phase is marked by mechanisms of exploitation of poverty, such as milking, the North American equivalent of the European practices of slum landlords (overpriced rental of degraded housing to captive customers who have no other accommodation solution). It is also reinforced by phenomena that are much more specific to American cities, structurally organized by racial segregation, such as blockbusting (an operation that consists of making white owners believe that several black households, which are factors in the depreciation of real estate, intend to move into the neighborhood in order to quickly buy back their property at a low price) or redlining (refusal to grant conventional real estate loans in certain neighborhoods of a city, which are judged to be too risky and therefore likely to cause difficulties in reselling a property that has been seized by the bank following the impossibility of the borrowers to make the monthly payments). Under these conditions, devaluation is "a strictly logical, 'rational' outcome of the operation of the land and housing markets" (*ibid.*).

The story goes that D. Harvey did not give much thought to the draft of the 1979 paper on the grounds that Hoyt had already observed "land value valleys"¹¹ resulting from such processes in the 1930s (Slater 2017). But Smith did not simply rename the object discovered by Hoyt (whom he quotes) the 'rent gap'. On the contrary, he extended the inertial approach to show how it can ultimately promote reinvestment, thus applying Harvey's historical-geographical approach to a concrete case: "As well as creating barriers to the further valorization of capital in the built environment, however, the steady devalorization of capital creates longer term possibilities for a new phase of valorization, and this is exactly what happened in the inner city" (Smith 1982), p. 147). Progressively, the gap between the land rent effectively capitalized under current land use (capitalized ground [land] rent – CGR or CLR from now on) and that potentially extractable under the most intensive use¹² (potential ground [land] rent – PGR or PLR from now on) increases: when this gap is sufficiently large, it encourages the inflow of capital in search of highly profitable real estate developments, which will fill this gap. The graphic formalization of this sequence (Figure 1), apparently very simple and intuitive, will ensure the success of this attempt to explain gentrification.

11 The term refers to the steepening of the price gradient in the inner cities (visualized on two axes with distance to the center on the x-axis and land rent on the y-axis, the curve deepens in the pericentral sector and draws out to resemble a valley in section).

12 This is the formulation chosen in the 1979 article ("highest and best use"). Later, Smith conceded that it could only be "higher and better use" (Smith, 1996).

Figure 4.1 The rent gap: graphical formalization according to Smith



Source: Smith, 1979.

Smith reiterates that "[t]his schema is ... meant to provide a general explanatory framework within which each neighborhood's concrete experience can be understood" ((Smith 1996)p. 60). However, he acknowledges that neighborhood change is only partly controlled by the rent gap: in particular, it is difficult to associate the intensity of decline with the likelihood of gentrification, and thus to predict which rent gaps will be filled (*ibid.*, see also (Clark 1988). Indeed, while the dynamics of gentrification primarily affect the inner city areas of large cities, Smith also notes that neighborhoods less affected by decline but promising to investors may also be the object of reinvestment. Just as it would be illusory to set a threshold at which rent gaps would automatically be filled, it would be illusory to limit the appearance of rent gaps to city centers and inner city areas. By affirming that "[t]he land value valley may be displaced outward and in part upward as gentrification revalues central city land (...), and as disinvestment is displaced outward to the closer, older suburbs leading in turn to a new flurry of complaints that middle-class suburbs now face 'city-problems'" (Smith 1996), Smith also opens the door to the possibility of non-inner city¹³ rent gaps.

4.3.1 An all-encompassing and still relevant hypothesis

Although not exhaustive, the data in the Web Of Science clearly show on the one hand that the rent gap hypothesis has been the subject of numerous publications since its appearance, and on the other hand that the number of these publications has recently increased. Indeed, until the middle of the 2010s, there were regular publications, although relatively few in number (5/year at most). This number then doubles. From a sample of publications representative of editorial activity in this field, two main findings can be drawn (Table 4.1).

First, there is a clear tendency to apply the rent gap framework outside the inner city areas for which it was originally designed. Smith himself considered rent gaps to be just one of several cases of the urbanization of

¹³ In one of the most famous papers on the rent gap, Clark (1988) mentions a Swedish theory (Asplund *et al.*, 1982) that is quite close to these concerns: the *förändringstryck* ("pressure to change"). Based on land rent gradients, it compares current levels of "yield of property capital" with potential levels and shows that, regardless of distance from the center, there are neighborhoods where the use is in line with the expected level of return, and others where it is lower. The latter are therefore likely to experience "pressure to change".

capital, and such a spatial extension was all the more to be expected given that 40 years have passed since the hypothesis was first formulated, marked moreover by financialization (French *et al.* 2011), the deregulation of capital markets (Peck Tickell 2002), the increased liquidity of land and real estate assets (Aalbers 2019), the return of rent (Christophers 2019), the rescaling of statehood and increased competition between territories at all scales (Brenner 2004) etc. Many articles now apply the rent gap framework to suburbs, rural areas or tourist districts. Very quickly, this decentering to the intra-urban scale is also accompanied by an application of rent gap theory to a non-US context. It is thus remarkable that the first three "live" tests of the rent gap hypothesis were conducted in Canadian, Swedish and Australian cities. It may be argued that Canadian and Australian cities share many characteristics with their American counterparts (period of foundation, rapid urban growth, density and urban form, etc.). But on the one hand, they are different in terms of racial segregation, and on the other hand, subsequent publications clearly show that the application of the rent gap to other national contexts, including the Global South, is structural.

Secondly, there is a very clear split between the late 1990s and the early 2000s. The first period is marked by the intense debate described above, based in particular on very important case studies, foremost among which are the remarkable articles by E. Clark (Clark 1988) and B. Badcock (Badcock 1989). This period of very precise and theoretically sophisticated investigations ended with D. Hammel's paper on Minneapolis (1999). This was followed by a period of widespread dissemination of the notion of the *rent gap*, which, while bringing its share of theoretical (López-Morales *et al.* 2019, Lan Lee 2020) or factual (Shin 2009, Porter 2010) advances, also ignores a good part of the theoretical issues that the previous period had identified. The contours and some basic parameters of rent gap theory are becoming increasingly blurred, or even disappearing: land rent (see Box 4.1), capital depreciation, capital switching, land transactions, etc. Despite the persistence of some in theoretically testing the rent gap hypothesis or in seeking protocols for doing so, a rent gap is becoming increasingly synonymous with an initially cheap area whose prices or rents are rising. In the same way, the use of the rent gap concept no longer necessarily serves questions of socio-economic geography but can also feed into problems of urban morphology or planning.

Table 4.1: 40 years of work on the rent gap (selected publications)

NB: the selection criteria for these publications (methodological and factual advances, exemplary dissemination of the rent gap concept to different fields and different issues) are not formal and systematic. They are based on the author's expertise and experience.

AUTHORS	LAND INVOLVED	MAIN CONTRIBUTIONS
(Smith 1979)	Philadelphia, 1960s and 1970s	Cycle of devaluation and filling of the rent gap Non-suburban origin of gentrifiers
(Ley 1986)	22 Canadian metropolitan areas, 1971 and 1981	Multivariate analysis on 4 families of criteria Rejection of the role of real estate market dynamics (which include the rent gap)
(Clark 1988)	Malmö, 1860-1985	First real statistical test of the rent gap hypothesis. The rent gap can also be explained in Marshallian terms. The rent gaps are slowly widening, and more due to the rise of the PLR than to the collapse of the CGR
(Badcock 1989)	Adelaide, 1960s and 1970s	Existence and filling of rent gaps over the period. Gentrification is only a "third-best response" to fill the rent gaps (after CBD extension and densification). Important role of public policies in filling rent gaps. Capital switching is not proven.
(Phillips 1993)	Gower Peninsula, 1980s and beginning of 1990s mainly	Existence of a rent gap in rural villages. Role of home owners who are looking for an increase in property value.
(Hammel 1999)	Minneapolis, 19th and 20th centuries	Builds on the method of Clark, 1988 and reaches the same conclusions about the respective roles of the CGR and the PLR.
(Darling 2005)	New York State's Adirondack Park, beginning of the 2000s	Rent gaps in rural areas in the form of undercapitalized land (undeveloped land or housing rented to local workers rather than to tourists with higher purchasing power).
(Diappi Bolchi 2008)	Simulation	Simulation of the evolution of rent gaps by Multi-Agent System (MAS) and Cellular Automata (CA)

(Shin 2009)	Seoul (and South Korea of macroeconomic parameters)	Highlighting of a capital switching of national scale Rent gaps and public facilities guide the location of new real estate programs
(Porter 2010)	New York, 1990s and 2000s	Existence and displacement of rent gaps to the periphery as they fill in.
(Slater 2017)	Not applicable	Gentrification as a "global urban strategy".
(Yrigoy 2019)	Palma de Mallorca, 2010s	Appearance of a rent gap because tourist rentals are more profitable than long-term rentals to locals. Possibility of rent gap without depreciation.
(López-Morales et al. 2019)	Santiago, Chile, 2008-2011	Substitution of the terms CGR1 and CGR2 for CGR and PLR (CGR1: revenue of owners selling their to developers ("the smaller portion of the rent gap"); CGR2: net profit of developers ("the larger portion of the rent gap"). Role of government in creating and filling rent gaps through development (which grows the CGR).
(Liu et al. 2019)	Chongqing (simulation)	Simulation of rent gaps by CA. Simulation of public intervention and macroeconomic parameters. Objective of the simulation: urban planning.
(Lan Lee 2020)	Taipei, 2000s and 2010s	Shift from the "classic rent gap theory" to the "state-induced rent gap" Rent gap locations different from those predicted by Smith. Filling of rent gaps guided more by PGR than by CGR.
(Asante Ehwi 2020)	Kumasi, 2010s, 2020	Exploitation of rent gaps by transforming collective houses into private apartments (with higher rents). Stable landlords but new tenants.

Realization: Boulay, 2021.

4.2 Testing and quantifying the rent gap hypothesis

4.4.1 Beggars can't be choosers: what parameters should we use to measure rent?

The rent gap hypothesis as presented by Smith remains very theoretical – he himself never really tested it and left this work to his followers and detractors¹⁴. D. Ley (1986), E. Clark (1988) and B. Badcock (1989) were the first to reflect on the operationalization of the rent gap hypothesis. Although Clark's methodology has acquired the status of a reference almost unanimously, it is not without its problems, and deals only with the first of the three "arguments" of the rent gap theory that Badcock proposed to deal with: 1) the existence of a rent gap preceding gentrification; 2) the existence of a capital switch; 3) the fact that the latter coincides with a crisis of overaccumulation in the primary capital circuit (Badcock, 1989).

The very concept of rent is extremely difficult and has always given rise to intense controversy (Guigou 1982, Boulay 2011) between the supporters of a Ricardian and Marxian definition of rent – to which Smith is attached – and those of its redefinition by the neoclassicals (see Box 4.1) – to which Bourassa, a leading figure in the standard theoretical offensive against the rent gap theory of the 1990s, refers. But the operationalization of the test of the first argument of the rent gap hypothesis is all the more perilous because the terms CGR/CLR (capitalized ground rent/capitalized land rent) and PGR/PLR (potential ground rent/potential land rent) proposed by Smith do not correspond to established expressions in basic economics¹⁵. Moreover, these new terms are somewhat ambiguous ((Bourassa 1993). For Smith, in fact, the CGR/PLR pair expresses the "rent" differential between the current, effective use of urban land ("capitalized under the present use") and the most remunerative use that could be imagined ("under the highest and best use"). Yet even E. Clark, a herald of the rent gap hypothesis, recognizes the "ambiguous" nature of the concept of CGR (Clark, 1988). This ambiguity (Badcock, 1990) is due to the fact that Smith himself often confuses rent with the "theoretical" value of a plot of land, both in practice and in his vocabulary (see Smith, 1987, for example). In the latter perspective, there is no reason to distinguish between

¹⁴ Criticizing the non-operational nature of the variables used by Ley (1986) to test the *rent gap* (Smith, 1987), Smith was rightly told by the latter (Ley, 1987) that he had neither results nor methodology to oppose him.

¹⁵ Which mobilizes instead the terms of absolute, monopoly and differential rents (Guigou, 1982, Boulay, 2011).

potential value and current value: "[p]ure valuation theory, as Bourassa points out, denies the validity of a measure of current market value under an existing use; that is, strictly speaking, any measure of land value should be independent of use. In theory, therefore, land value and rent represent the discounted value of the future net return to a vacant site under the "highest and best use" (the traditional appraisal, or valuation, term). The notion of 'actual land rent' as a function of current use is obviously at cross purposes with this" (Badcock, 1990, p. 459). In other words, since capitalization corresponds to the discounting of expected future income from a location, how can one distinguish between CGR and PLR, especially when one seeks to separate land and buildings analytically?

This relative vagueness does not facilitate the operationalization of the calculation of rent parameters, which is always difficult anyway. Since rent is hidden in production costs or in the transaction prices of real estate, any case study must necessarily involve the use of proxies (Badcock, 1990). E. Clark develops in his case study a careful methodology for approaching CGR and PLR. To isolate the CGR, he separates the value of what is built from the value of the land by using the financial bases of property taxes. To circumvent the effects of delays in updating the tax bases, he corrects for local market fluctuations. He then approaches the PLR through the land transactions that immediately precede development operations (Clark 1988). B. Badcock recognizes the quality of Clark's methodology but does not have access to such rich data. He therefore falls back on bare land and real estate prices, which he considers "[t]hey can be equated for the purposes of analysis with Smith's concepts of 'capitalized ground rent' and 'potential ground rent' " (Badcock 1989), p. 127).

In his 1996 book, which concludes his "rent gap period", Smith praises the very fine work of Clark and Badcock in urban and economic geography, and considers them as arguments in favor of the validity of his rent gap hypothesis. However, while they did indeed conclude that the disinvestment-reinvestment cycle existed, they shared theoretical positions with Ley and, more broadly, with neoclassical positions: the reduction of rent to a market price or a market value theoretically implies translating the notion of rent into relatively standard terms. We know that Clark left open the possibility of interpreting the rent gap from a Marshallian perspective (Clark, 1988, Badcock, 1990, see also Box 4.1), while Badcock's approximation of the PLR bears witness to the use of very standard assumptions about the discounting of future income: "Although Smith takes the labor theory of value to be axiomatic, it is not essential to the derivation of the rent gap. The price of an undeveloped plot of land represents a market evaluation of the expected future income from its use; that is the potential yield or ground rent" ((Badcock 1989), p. 127). Thus, if all the theories of ground rent present important theoretical difficulties, it must nevertheless be recognized that Smith's conceptual framework is rather vague and leads one to give credence to Ley's definitive judgment in 1987: "The devalorization cycle and the mystique around the rent gap now become unnecessary baggage" ((Ley 1987)p. 468)!

Box 4.1: Rent, a central, complex and controversial concept

The term "land rent" is very frequently used in urban geography, and in urban studies more generally. In most cases, it is used in the sense of "land price" or even "property price". This equivalence is in fact problematic, because it refers to fundamental theoretical issues, which make land rent a complex and controversial concept.

Strictly speaking, and according to the definition given by the reference work on the subject, land rent is "the income of the landowner, as well as the price paid by the tenant for the right to use the productive faculties of the land" (Guigou 1982)p. 1). As such, "[t]his remuneration [land rent] can be considered as a surplus produced by society as a whole or as "what remains" after all those who contribute in one way or another to production have been remunerated" ((Guerrien 2002)p. 442). This residual and non-productive dimension is found, for example, in the common meaning of the word "*rentier*" (a person who receives income without working for it). This strict definition of rent is essential in the sense that it clearly refers to "distribution theories", i.e. to the explanations of "the way in which what a society produces at a given moment is distributed among its members" (*ibid.*). Thus, the way in which land rent is considered will depend on the way in which the distribution of wealth is considered (*ibid.*).

The proponents of distribution theories insisting on the division of society into social classes (mainly the Marxist tradition) will subscribe to a definition of land rent inherited from Ricardo's classical economics (1772-1823). According to Ricardo, land rent is the income of the landowner (who does nothing more than hold the monopoly of a right of use over a plot of land) deduced from market conditions. He illustrates this residual nature of rentier income with a very famous example: land rent depends on the price of wheat, and is not a cost of production, since the landowner merely captures part of the surplus produced by the farmer. Thus, "the highlighting of rent comes from Ricardo's and then Marx's study of forms of property and is only of

interest in a sociology of resources and wealth, attentive to the relations between differentiated social groups" (Boulay 2011), p. 49).

Conversely, the proponents of distribution theories insisting on the rationality of individuals differentiated by their function (producer or consumer) but united by the market (and its mechanisms for the optimal allocation of resources) will subscribe to a neoclassical vision of land, which they analyze as "an ordinary good" ((Guigou 1982), p. 542), considered like the others from the sole angle of scarcity in a competitive context. Following von Thünen's famous model, the neo-classical economists will thus study above all the "rents of location", that is to say the advantages of being located in a particular place. This approach is obviously found in the standard urban economic models of the 1960s. But what is important here is to stress the fact that, following in particular the work of A. Marshall (who first theorized externalities), the "neo-classical theory of land rent denies the specificity of land as an object of analysis and denies the specificity of rent as income" ((Guigou 1982)p. 411). This is particularly striking in contemporary methods such as hedonic analysis, which make location a factor in predicting the price of a property, among many others (proximity to a listed school, local taxation, living space or number of bathrooms, for example).

This is obviously not to deny the role of location in land or real estate prices, but it should nevertheless be emphasized that the neo-classical approach leads to forgetting the social dimension of wealth distribution among urban players. Conversely, appealing to the classical formulation of rent often indicates that one belongs to schools that are more attentive to the possibly conflicting issues of appropriation and distribution of wealth.

The ambiguity of Smith's rent theory is amplified by the fact that, despite his repeated protestations of allegiance to critical and Marxian theory, he very strongly limits its use to relatively standard issues. Fundamentally, rent is indeed "the *income of the landowner*, as well as the *price paid by the tenant* for the right to use the productive faculties of the soil" ((Guigou 1982), p.1, emphasis added). However, Smith never considers it as an income but rather as an explanatory factor of the use of the land and its evolution. In so doing, he once again links up with standard urban economics, which are concerned with the location of activities and the evolution of land use (see Box 4.1): the work of D. Hammel, which shows that the CGR is determined by neighborhood effects and the PLR by the metropolitan scale, also points in this direction (Hammel 1999). Despite repeated references to D. Harvey or to the monopoly power of landlords, Smith never refers to accumulation processes as such¹⁶, nor to the distribution of different types of income between actors in the land and property market. Unfamiliar with European works¹⁷ - unlike Harvey - he leaves aside in particular the question of the balance of power between landowners and developers, and several times seems to make rent an intermediate cost that would be added to the value of a building and the work done on it, thereby forgetting the fundamental fact that rent is a residual income and can as such take its place in a logic of the *compte à rebours* type¹⁸.

16 According to T. Slater (2017), it is also this lack of knowledge of rent theories that would have explained D. Harvey's (then in the midst of writing his masterwork, *The Limits to Capital*, whose chapter on rent is particularly thorough and critical) lack of interest in the 1979 article.

17 Notably French – particularly rich in the 1970s and 1980s around neo-Marxist or regulationist authors (Ch. Topalov, A. Lipietz, J. Lojkine) or not (J.-J. Granelle) - but also British (Massey and Catalano) or Italian (Campos-Venuti).

18 The notion of "*compte à rebours*" (Aveline, 2005) shows how the price of the land (and therefore the "land cost" that the developer will pay to the owner, who will then benefit from a "land rent") depends on the sale price of the property. The developer will subtract from the latter all the fixed costs (construction, legal and marketing support for the project, etc.) and its commercial margin and will be able to allocate the balance of this subtraction to the purchase of the land. The specificity of this calculation is that the increase in real estate prices is passed on more than proportionally to the land charge/rent if real estate prices increase faster than the - more or less fixed - construction and carrying costs (this is what is known as the "leverage effect" of real estate on the land).

To the best of our knowledge, the only application of the rent gap that is attentive to this type of problem is that of E. López-Morales ((López-Morales *et al.* 2019)): by substituting the CGR1-CGR2 pair for the CGR-PLR pair, López-Morales abandons the problem of investment in real estate as such and insists instead on the land rents that incumbent owners obtain through the sale of their parcel (CGR1) to developers who carry out profit-generating operations on it (CGR2).

Of the three components of the hypothesis that Badcock (1989) proposed to test (1) the existence of a rent gap preceding gentrification; 2) the existence of capital switching; 3) the fact that the latter coincides with a crisis of overaccumulation in the primary capital circuit), the first has generated much more theoretical and methodological debate than the other two. This omission of the dimensions relating to capital switching is very revealing of the problems we have just pointed out: by forgetting the circulation of capital in the operationalization of the rent gap hypothesis in favor of the link between the value of a location and the evolution of urban forms, it is "supply" in Harvey's sense that disappears.

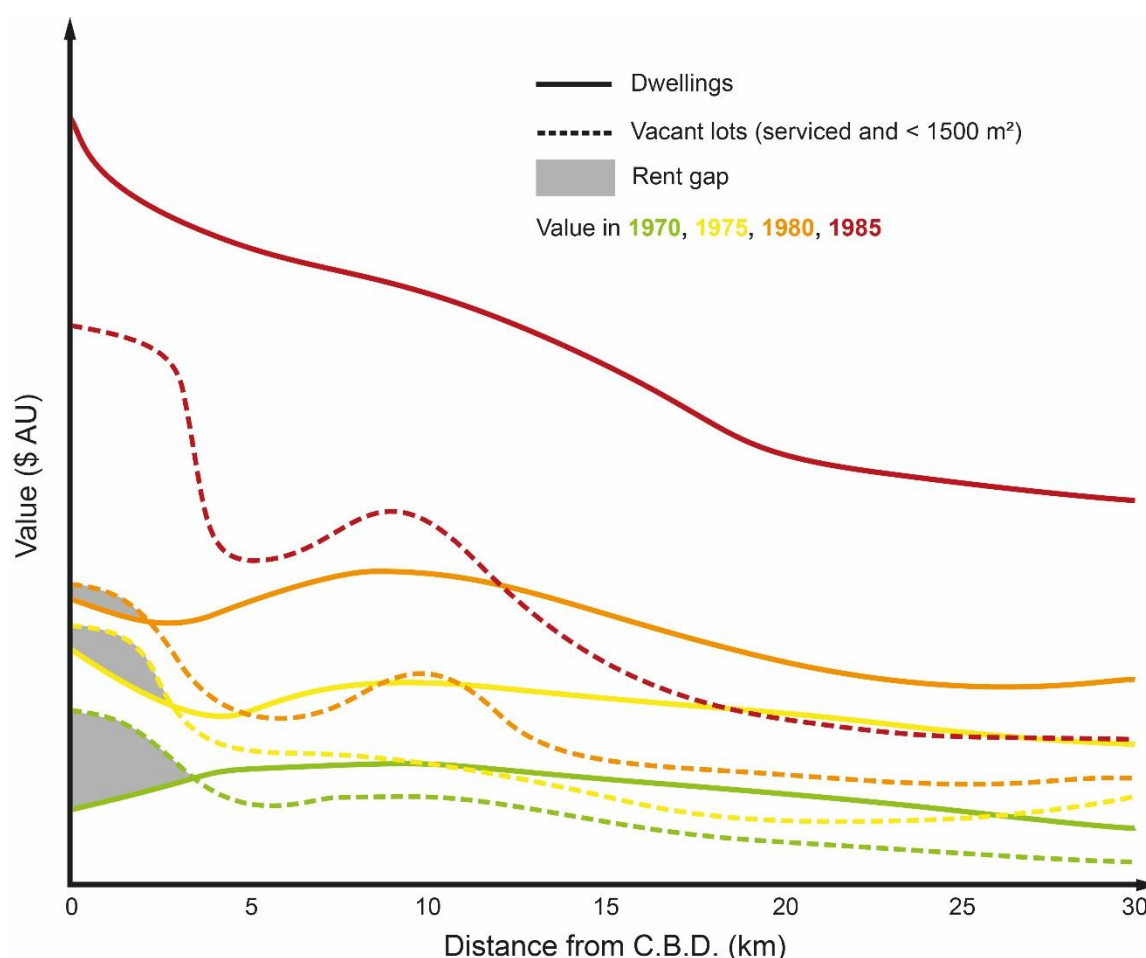
4.4.2 What spatial and temporal scales should be adopted?

These shortcomings in the treatment of the rent gap draw attention to the problem of the scale of work. To test the hypothesis correctly would ideally require three steps: to ensure the existence of capital switching (i.e. to work at least on a national scale, and on relatively long time steps); to ensure the existence of a devaluation-reinvestment cycle (i.e. to work over several decades, as E. Clark or D. Hammel have done); and finally, to ensure the specific behavior of neighborhoods that are suspected of experiencing rent gaps (thus working on fine scales at the scale of an entire urban area).

The first two requirements pose numerous problems (notably the choice and availability of variables) but no real methodological challenge – even if the choice of scales for testing capital switching is highly complex, all the more so in a context of financialization and the extensive liberalization of international capital markets. On the other hand, the last point is of great interest to geographers, since it demonstrates the solidarity between methodological devices and the ability to identify problems or objects. In other words, just as it is necessary to be able to identify the existence or filling of rent gaps by operating variables, it is necessary to be able to have both a fine and appropriate spatial grid and a sufficiently large study field to be able to identify rent gaps, i.e. to isolate them, to distinguish them from other modalities of evolution of real estate prices, land rent or socio-demographic indicators of gentrification. This problem arises particularly in the case (frequent in the academic literature on gentrification) of research conducted on a single neighborhood or in qualitative research on the rent gap. These research methods make it difficult to control for two effects: a possible change in the socio-demographic structure of the urban area or of the larger scales into which it is inserted, and a possible general increase in the real estate market that would make a local increase seem like the closing of a rent gap.

B. Badcock proposed in 1989 a graphical representation of rent gap filling that was richer than its formalization by N. Smith (Figure 4.2).

Figure 4.2: Evolution and location of rent gaps in Adelaide (source: Badcock, 1989)



Source: Badcock, 1989 (simplified).

This type of figure makes it possible to localize the existence and filling of rent gaps: unlike Smith's figure, which is limited to a two-dimensional approach (value and time), Badcock's figure makes it possible to reason "in three dimensions" (value, time and distance to the center). We can thus observe the filling of rent gaps through time (thanks to the superposition of curves corresponding to different years) while locating this phenomenon (thanks to the abscissa scale). Figure 4.2 shows that the rent gaps in Adelaide extended over a band about 3 km thick, adjacent to the CBD. However, this type of graphical representation is only fully effective if the city has a von Thünen-type land rent gradient. In the case of an urban structure that is more marked by asymmetries or major discontinuities, it will be more difficult to identify the phenomena that interest us. Another fact argues in favor of fine mapping of spatio-temporal price dynamics: several studies have shown that certain recent episodes of real estate inflation were not only general but could also lead to price convergence phenomena between neighborhoods (Guéris Le Goix 2009, Hamnett 2009, Boulay 2012, Ramírez Peña 2012). Under these conditions, it becomes difficult to immediately equate a local price catch-up with the closing of a rent gap. The addition of another criterion, such as changes in the price hierarchy between spatial units (Boulay 2012) would then be an additional index of rent gap closure, necessary but not sufficient.

4.5 What place for the rent gap theory in the geography of real estate?

4.5.1 Soluble rent gaps in the massification of real estate investment?

The volume of capital invested in the built environment has grown very strongly since the early 2000s. This growth is inseparable from the specificities of the post-Fordist regulation regime, which favors the development

of a "wall of money"¹⁹ structurally favored by a set of characteristics (Fernandez Aalbers 2016): the development of pension fund capitalism, the savings glut generated by emerging economies, loose monetary policies, quantitative easing²⁰ and the growth of capital income, which is increasingly untaxed. To be profitable, this abundant capital must be directly invested or lent. The years 2000 and 2010 were thus marked in most of the world's rich countries by an extremely pronounced rise in real estate prices (Agnello Schuknecht 2011); Dokko et al., 2011). This "global real estate bubble" (Dokko et al. 2011) is thus inseparable from financialization and, more specifically, from the structurally increasing indebtedness of households (Jordà et al. 2016, Fernandez Aalbers 2016) and the availability of credit (Taylor 2007, Dokko et al. 2011). While radical geography might be expected to see the unprecedented inflow of capital into the built environment as a manifestation of capital switching (Harvey 2012, Sassen 2012), standard economists such as J. Stiglitz have also pointed to the fact that the real estate sector was conceived as a growth driver following the bursting of the dot-com bubble in 2000 (Stiglitz 2010).

In this context, identification of cases where rent gaps have been filled is all the more difficult because of the disconnection between price growth and gentrification on the one hand, and between initial devaluation and social change on the other. With regard to the first disconnection, and without obviously contesting the existence of gentrification phenomena, it seems risky to us to subscribe to the idea of possible "planetary rent gaps" put forward by T. Slater (Slater 2017) following Smith's theses on gentrification as a "global urban strategy" (Smith 2002). While it is certainly difficult to deny the phenomena put forward by Slater – the return of rent, the development of exchange values to the detriment of use values or neo-Haussmannization (Merrifield Merrifield 2014) – seems important to us not to equate problems of housing affordability with gentrification. Indeed, it is precisely the fact that the rise in real estate prices is widespread (Wetzstein 2017) that signals the specificities of the last twenty years in terms of the urbanization of capital. Moreover, not subscribing to the systematic reduction of price increases to gentrification does not mean leaving aside the socio-demographic consequences of real estate inflation: on the contrary, it means leaving open the possibility of studying differentials in the enrichment or vulnerability of households induced by the availability of real estate credit (Le Goix et al. 2020). With regard to the disconnection between the initial devaluation of a neighborhood and its dynamics of social change, one should also be cautious. As we know, Smith himself admitted that the devaluation of a neighborhood did not *ipso facto* lead to its revaluation. On the other hand, his writings have always implicitly admitted that the non-revaluation of a neighborhood was accompanied by the continuation of the disinvestment process. However, the development of subprime loans – probably the most advanced example of the availability of real estate credit in the 2000s – was clearly accompanied by "reverse redlining"²¹ (Hinnant-Bernard Crull 2004) without any social change: the initial devaluation is indeed an explanatory factor for the reinvestment of capital, but this does not induce gentrification – and quite the opposite after 2007 (Aalbers 2012).

These structural changes in the real estate markets are totally in line with the "supply-side theories" to which Smith attached the rent gap. The fact remains that the rent gap is completely buried among all the forms of real estate inflation, and virtually absent from the abundant literature that describes and theorizes them. Most tellingly, Smith is not cited once in the review of real estate literature by the current leading authority on global real estate

19 The term refers to the immense masses of available liquidity awaiting sectors in which to invest (Fernandez, Aalbers, 2016, Boulay, 2019).

20 Pension fund capitalism refers to the system of accumulation marked by a balance of power favorable to capital income rather than labor income, in particular in relation to the weight of institutional investors – including pension funds – intended to finance funded pensions. The savings glut is sometimes also called the global saving glut, or GSG. This refers to the growth in the stock of savings, which may be used to finance certain sectors of the economy (including outside national borders, as was the case for some of the Chinese savings that contributed to the financing of the US subprime mortgage market). Loose policies are monetary policies described as "flexible" or "lax" (with regard to the objectives of fighting inflation) and which are based in particular on the reduction of central bank key rates (and therefore of interest rates, by repercussion). These "unconventional" monetary policies are often based on quantitative easing (QE), a practice that consists of central banks buying up private debt securities in times of financial crisis.

21 The loosening of prudential rules for granting real estate credit facilitated the delivery of very large numbers of subprime loans in disadvantaged neighborhoods: deprived of real estate credit for decades due to redlining practices (see note 15), these neighborhoods were during the subprime episode preferential places for its accumulation (Aalbers, 2012; Hernandez, 2012; Sassen, 2012).

geography (Aalbers 2019), and only once²² in another seminal article on the place of real estate in urban studies (Aalbers Christophers 2014).

4.5.2. *The scales of the social construction of markets*

This increased supply of capital for real estate and the urban environment in general makes it possible to reconsider in a new light one of the results most frequently drawn from rent gap tests: the relative roles of the CGR and the PLR in the creation of rent gaps. While Smith conceives of the creation of a rent gap as a scissors effect (collapse of the CGR, growth of the PLR), many empirical works conclude instead the driving role of the PLR alone (table 4.1): several authors indeed mention the possibility of rent gaps being created without any initial depreciation or insist on the reasons for the growth of the PLR (Darling 2005, Yrigoy 2019, Asante Ehwi 2020, Lan Lee 2020, López-Morales *et al.* 2019). In doing so, they add fuel to the fire of E. Clark and D. Hammel who had already concluded the asymmetric contribution of the CGR and the PLR in creating rent gaps (Clark 1988, Hammel 1999). Since the PLR corresponds to the maximum value that can be obtained from buyers, its increase (in other words, real estate inflation) is inseparable from the policies allowing the inflow of capital into real estate markets that were recalled in the previous section. The concept of "real estate rent" proposed by Ch. Topalov (Topalov 1984) would then be more effective than that of PLR: by making it the equivalent in the real estate domain of Marx's absolute rent in the land domain, we can capture the increase in price of all real estate independently of their conditions of production or their individual characteristics²³ (Boulay 2011). Recourse to the notion of real estate rent would also make it possible to overcome the ambiguities of Smith's distinction between CGR and PLR, and to repair the omission of the fact that land rent is determined by the sale prices of real estate.

Nevertheless, the driving force behind the increase in PLR must draw attention to a crucial point: the availability of capital for urbanization and the real estate market is not a natural phenomenon. The financialization of the global economy is itself far from being reducible to simple deregulation, and should rather be conceived as a new form of regulation (Peck *et al.* 2010). But even beyond this structural shift in the regulation regime, policy measures are piling up at all scales that facilitate the transfer of capital to the built environment and household real estate loan activity. At the national level, incentives for household homeownership feed an asset-based welfare program that shifts the burden of protecting against life's risks to households through the ownership of housing wealth, conceived as forced savings and a cash reserve to cope with dependency (Doling Ronald 2010, Aalbers Christophers 2014). These policies of "privatized Keynesianism" (Crouch 2009) are accompanied in OECD countries by massive state support for the real estate sector through the development of aid for home ownership, tax exemption for real estate investment, loan guarantees, etc. (Schwartz Seabrooke 2009, Pollard 2010). At finer scales, a wide variety of zoning schemes complement this market support, guiding capital as well as helping to ensure its profitability, notably through public investment in networks and public facilities (Kirkpatrick Smith 2011, Phelps Miao 2020). All of these phenomena "invite us to consider [real estate] markets as social, historical, and political constructs structured by field mechanisms at least as much as by the interplay of supply and demand" (Bonneval Pollard 2017), p. 5), which points to two problematic issues in rent gap theory.

The first relates to public policy and the impact of growth coalitions: although Smith, in his early work on the rent gap, mentions the role of public policy (or the state), it is clear that the latter is not at the center of his concerns, as shown by the graphical formalization of the rent gap, whose parameters are solely spatial and economic. However, B. Badcock showed very early on, based on the case of Adelaide, that filling the rent gap required extensive government support to guarantee reinvestment. Later, many studies also pointed to these public policies (e.g., (López-Morales *et al.* 2019)), even going so far as to put forward the idea of "state-induced rent gaps" (Lan Lee 2020). This construction of local land and property markets is a fundamental aspect insofar as it combines with broader dynamics of property price fluctuations and questions Smith's relatively deterministic scheme. The latter is in fact based on the growth of the PLR and, implicitly,²⁴ on a gradient of rent between the center and the periphery. Here again, empirical studies show that these arguments alone are unacceptable for detecting rent gaps: it has been shown that in a context of very high property inflation and generalized catching-up between neighborhoods, areas located at the same distance from the center and with similar initial price levels have

22 And again: it refers to the 1979 article about gentrification, not the rent gap as such.

23 Like the absolute rent in Marx, which weighs down even the most marginal lands.

24 Since, unlike the graphical representation proposed by Badcock, this parameter is absent from Smith's graphical formalization.

experienced different developments. One of them became much more expensive but retained its place in the price hierarchy, while the other, which was involved in a large-scale public development operation, experienced an evolution comparable to the filling of a rent gap, propelling it higher up the price hierarchy (Boulay 2012). The second aspect, obviously more difficult to decide, refers to the long-standing issue of the integration of supply and demand theories. As L. Bonneval and J. Pollard have pointed out, the social construction of markets could be a possible avenue: the mechanisms for channeling capital into real estate are in fact accompanied by discourses and measures (particularly, but not only, by planning measures) that are likely to create new preferences in terms of location choices. Like all constructivist or interactionist epistemologies that seek to establish in the human and social sciences the coexistence of individual motivations and structural constraints, such an integration will necessarily lean to one side or the other (Corcuff 2007), but will undoubtedly have the advantage of better integrating changes in consumption into the economic theories of the city.

4.6 Conclusion

In its first formalization, the rent gap theory is very much influenced by the American context. The choice of the case study outlined in Smith's inaugural paper reveals this very clearly: after extremely rapid population growth in the 19th century and during the first half of the 20th century, the center of Philadelphia lost several hundred thousand inhabitants after 1950, to the benefit of its periphery (which grew strongly after the war and then much more slowly from the 1970s on). This demographic trajectory was accompanied by phenomena specific to the cities of the eastern United States: massive white flight, population insecurity, development of delinquency, tax revenue crisis and "race" riots. As in many other cities in the region, this context has encouraged urban renewal, both in terms of housing and infrastructure. However, this initial proximity between the US context and the rent gap theory was quickly overcome: we have seen that the first three quantitative tests of the rent gap were conducted in non-US cities. Subsequent events will confirm the disconnection between the rent gap theory and the US context, which is corroborated by the fact that the authors of the publications cited in this chapter never consider the application of the rent gap theory to other national contexts to be problematic, and are often content to point out any specificities of national housing or credit policies.

How, then, can we explain this transposition of the rent gap outside its native land? American city centers and peri-urban areas have characteristics that lend themselves particularly well to Neil Smith's approach: land and real estate markets that are less regulated than in continental Europe, financing methods that are more liberalized than in the majority of OECD countries and, even more so, in the countries of the South, more recent and often less durable real estate, and so on. These are all parameters that favor the mutability of urban fabrics and the anchoring of capital in cities. But two elements explain the expatriation of the rent gap. On the one hand, the influx of capital into the built environment has been a global phenomenon for the past 20 years and is much more pronounced than in 1979, going hand in hand with a structural liberalization and financialization of real estate markets (Fernandez Aalbers 2016). On the other hand, a number of publications in fact testify to the possibility of alternative gentrification processes to the demolition/densification construction model. By increasingly emphasizing the role of PLR rather than CGR, many authors finally draw attention to the possibility of gentrification without destroying degraded and inherited built form²⁵. In doing so, it is understandable that rent gaps can be filled in classified tourist areas or in rural areas, which are by definition not very dense. It should also be borne in mind that the heritage or tourism development of city centers is far from exhausting the intra-urban dynamics of old Europe: the presence of old city centers and the existence of relatively strong urban planning in relation to international standards do not exclude the possibility of very heavy development operations in the inner suburbs of formerly industrial areas.

In this context of financialization and profound urban change, which is conducive to the study of the rentier phenomena, the rent gap model is of considerable interest: despite its major theoretical shortcomings and the difficulty of implementing it, it represents one of the rare alternative spatial models to those based on standard economics. Provided that it is better equipped methodologically - in particular through a detailed and robust study of the spatio-temporal dynamics of land and property markets - it could represent an interesting basis for

25 Smith is aware of this possibility (his 1979 article refers extensively to the rehabilitation of existing buildings) but never theorizes his relationship to demolition/densification even though his implicit reference to urban density gradients would require it.

investigating the actual dynamics of the transformation of urban fabrics and the social division of space. Indeed, by claiming to be part of the urban political economy, a number of contemporary works in economic geography demonstrate a laudable desire to re-politicize economic phenomena, but unfortunately tend to be confined to very macro scales (particularly international comparisons).

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