A CRITIQUE AND REFORMULATION OF SMITH'S RENT GAP THEORY OF GENTRIFICATION

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Since Smith[1] introduced the theory of rent gap to explain gentrification, it has been evaluated critically.[2] However, the evaluation is focused on the explanatory capability of the theory. No attempt has been made to evaluate the theoretical foundation and validity of the rent gap. The major objective of this paper is to analyze the rent gap critically from both the Marxist and other so-called liberal perspectives. The rent gap notion is not found in previous Marxist literature. Therefore, it is necessary to analyze the rent gap notion in the context of Marxist economic theory. We may gain some insights on the subject by surveying the mainstream literature that deals with urban redevelopment, since it is pertinent to the rent gap theory. This may be the first step toward formulating a better theory of gentrification.

The first part of this paper reviews Smith's rent gap theory and the basic notions in Marxist land rent theory. The second part is a detailed theoretical analysis of the components of rent gap: potential ground rent and capitalized ground rent. Then I propose an operational version of the rent gap. Some factors which may complicate the interpretation of the rent gap are also discussed. Finally, the urban redevelopment scheme founded on land economics will be discussed. The scheme is very similar to the rent gap theory and its merits are highlighted.

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*Recipient of the 1988 AAG Middle States Division Meeting Graduate Student Paper Award.

[1]Neil Smith, "Towards a theory of gentrification: A back to the city movement by capital not people," *American Planning Association Journal* 45 (1979): 538-48.

[2]Chris Hamnett, "Gentrification and Residential Location Theory: A Review and Assessment," in *Geography and the Urban Environment: Progress in Research and Application*, eds. D.T. Herbert and R.J. Johnston, vol. 6 (Chichester: John Wiley & Sons, 1984), pp. 283-319.

REVIEW OF SMITH'S RENT GAP THEORY

Smith uses the notion of rent gap to explain the emergence of gentrification. It is generally agreed that gentrification involves either renovation of housing units or reconstruction (demolishing old structures and building of new ones). Bourne[3] points out that "gentrification has a more explicit class connotation in which 'traditional working-class neighborhoods are invaded and occupied by middle and upper income groups'."

As Smith states, the rent gap is the difference between the potential ground rent and the capitalized ground rent. According to Smith, "potential ground rent is the amount that could be capitalized under the land's 'highest and best use'", and the capitalized ground rent "is the actual quantity of ground rent that is appropriated by the landowner, given the present land use."[4] Smith continues to point out that "the rent gap is produced primarily by capital depreciation (which diminishes the proportion of the ground rent able to be capitalized) and also by continued urban development and expansion (which has historically raised the potential ground rent level in the inner city)."[5] This definition implies that urban development and expansion are the determinants of potential ground rent according to Smith's framework. The gap can be totally or partly closed; that is, all or a large portion of the ground rent can be capitalized when the developer redevelops the piece of land having the rent gap. Smith conceived that redevelopment will not happen until the gap is wide "enough."[6]

Smith distinguishes three kinds of developers. They are: "(a) professional developers who purchase property, redevelop it, and resell it for profit; (b) occupier developers who buy and redevelop property and inhabit it after completion; and (c) landlord developers who rent it to tenants after rehabilitation."[7]

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[3]Larry S. Bourne, *The Geography of Housing* (New York: John Wiley &Sons, 1981), p.165.

[4]Smith, op. cit., footnote 1, p. 543.

[5]Smith, op. cit., footnote 1, p. 545.

[6]Ibid.

[7]Smith, op. cit., footnote 1, p. 546.

Two points that are significant to my analysis of the rent gap theory should be noted. Firstly, Smith does not distinguish renovation from reconstruction. Secondly, he differentiates between the two components of the return from the selling of redeveloped housing units, the "capitalization of enhanced ground rent and profit (quite distinct from builder's profit) on the investment of productive capital."[8]

Renovation and reconstruction are two modes of gentrification. The conditions under which of these modes are selected by the developers are different. It is crucial to understand why one type of gentrification occurs instead of the other under specific circumstances. The differentiation between two types of return highlights the important fact that both the landlord and the capitalist (structure or building owner) may benefit from redevelopment. The theme of his analysis stresses only the significance of the return to landowners, hence the rent gap is derived. The role of capitalists in gentrification has not received appropriate treatment throughout the formulation of Smith's theory.

REVIEW OF MARXIST LAND RENT CONCEPTS

In Marx's analysis of ground rent, three kinds of rent can be recognized. Differential rent, which is similar to what Ricardo had identified, arises from the savings in the cost of production by utilizing a specific piece of land. Marx distinguished between two types of savings by identifying differential rent I (*DR I*), "which is due to purely natural variations in the conditions of production, "such as soil fertility and location; and differential rent II (*DR II*), "which is due to variations in the conditions of production resulting from differences in capital investment."[9] The second type of ground rent that Marx identified is absolute rent which is the rent imposed on production having a relatively low capital intensity. It emerges because barriers are established so that capital cannot flow freely to equalize the rate of profit.[10] Hence, the absolute rent is levied onto the production cost of the commodity so that it will be sold at its value. Finally, when a landowner has a monopoly control over a particular type of land,

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[8]Ibid.

[9]Allen J. Scott, Land and land rent: an interpretative review of the French literature," in *Progress in Geography*, eds. C. Board, R.J. Chorley, P. Haggett, and D.R. Stoddart, (London: Edward Arnold, 1984), pp. 101-146.

[10]Simon Clarke and Norman Ginsburg, "The Political Economy of Housing," *Kapitalistate* 4-5 (1976): 66-69.

monopoly rent arises. Harvey elaborates this concept in the context of a fragmented urban class structure: that is, sub-classes are formed within social classes.[11] The specified type of sub-class Harvey is concerned with is the landed class, which has monopoly control over urban land. Hence, class-monopoly rent arises.

Now let us see how the rent gap emerges according to Smith. In a simplified urban setting, if there are two adjacent pieces of land, labelled as parcel A and B, it would be logical to assume that their *DR I* will be similar or even the same (because of similar location) if there is no boundary of any kind, such as zoning, between them. If parcel A has a 24-story apartment that yields a much higher ground rent than parcel B, which has a 5-story older structure, then the difference in total ground rent between the two parcels would be attributable to a differential of *DR II* because more capital is invested on parcel A than on B. From another perspective, even if the 24-story building in parcel A were not in the best use, it would still be in better use than the structure on parcel B. Parcel A has a more "rational" land use than parcel B because of urban expansion and development. According to Smith's definition of potential ground rent, the ground rent yielded by parcel A may indicate the potential ground rent, or a ground rent level close to the potential ground rent of parcel B. Then the difference between the ground rent yielded from parcel A and B can be regarded as the rent gap. However, using the traditional Marxist terminology, this gap is in essence the difference in differential rent II which arises due to the different capital investment (Figure 1).

SOME AMBIGUITIES ABOUT THE CAPITALIZED GROUND RENT

What should be the trend of the capitalized ground rent over time? Smith claims that the level of capitalized ground rent should increase first and then decrease over time. But the decrease will level off after a certain amount of time[12]. However, the time trend of potential ground rent needs to be better justified.

[11] David Harvey, "Class-Monopoly Rent, Finance Capital and the Urban Revolution," *Regional Studies* 8 (1974): 239-55.

[12] Smith, op. cit., footnote 1, p.554.

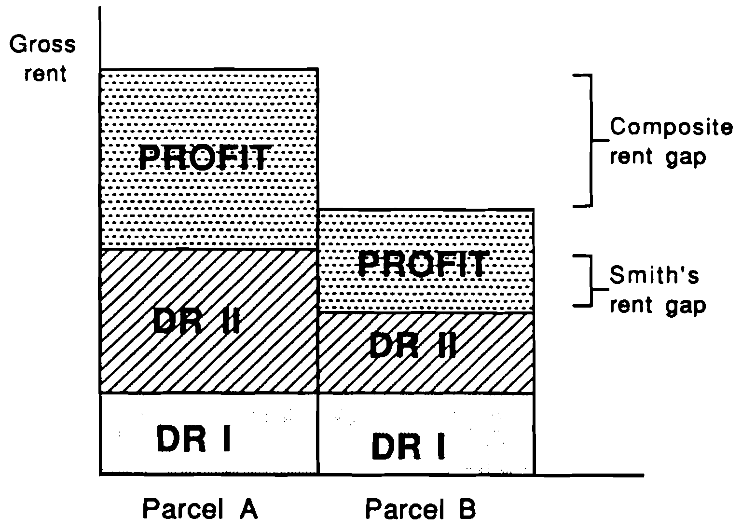

Figure 1. Smith's rent gap and composite rent gap

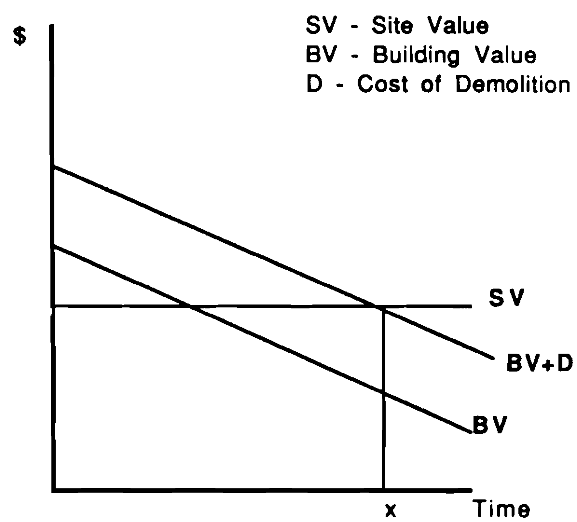

Figure 2. Building and site value (adopted from Hallett, p.70)

Assume that we are looking at a specific land parcel with a structure on it, while the conditions of the urban economy and the housing market remain constant over time. This assumption implies that Smith's potential ground rent will remain constant. If we assume that the structure will depreciate, thenboth the gross rent (or composite rent, i.e. the total amount of rent collected from the tenants), and the sale price of the property (including the piece of land) will decrease. However, throughout this period, the land value of the site value has not changed because we assumed that the level of urban development remains constant. Then the only change that would occur is the depreciation of the structure. Let us also assume that the landowner and the structure owner are not the same person.

Given the above situation, when the capital/structure depreciates, the total gross rent collected from the tenant should also decrease. The capitalist (or the structure owner) has to receive a lower profit because his capital has depreciated. The landowner may also have to receive lower differential rent II because the level of capital invested has dropped, while differential rent I remains at the same level. Therefore, the total capitalized ground rent may decrease due to the decrease in *DR II*. However, the level of ground rent is also determined by the class struggle between capitalist and landowner and by the ground rent level of land parcels of similar quality, that is, the ground rent level of the neighborhood parcels. As a result, the level of ground rent is likely to decrease because of capital depreciation, but its level should still be above the level of *DR I*.

To equalize his return from land with adjacent landowners, the landlord may bargain for higher ground rent from the structure owner regardless of the level of the depreciating capital invested on the land. In other words, the landowner will bargain for the highest return possible, given the location, so that the land use will move towards the most "suitable" type. The ground rent level may fall between the highest total ground rent level of the adjacent neighborhood and the level of *DR I* derived from his own parcel. Note that the level of *DR I* derived from his own parcel. Note that the level of *DR I* is assumed to be constant.

Now assume that urban expansion has occurred, and the demand for urban land and housing has been increasing. If a new structure is established on parcel A, next to the hypothetical parcel B that we analyzed before, it is likely that the new structure can be regarded as the best use and the ground rent level will satisfy Smith's definition of potential ground rent. Since urban expansion has occurred, the relative importance of the location would increase, and so would the *DR I*. This increase in *DR I* should be true for both the parcel with the new structure (i.e., A) and the adjacent parcel with the old structure (i.e., B). The increase in *DR I* should be parallel to the pace of urban expansion and development. The landowner of parcel B will ask for both *DR I* and total ground rent compatible with the corresponding ground rent level of its neighborhoods (i.e. the potential ground rent), even though the *DR II* may not be as high as its neighbors. In order to retain the right of using parcel B, the capitalist or structure owner may have to give up some of his profit to the landowner to fill up completely or partially the gap between the total ground rent for parcel A and parcel B. As a result, the discrepancy between the potential ground rent and the capitalized ground rent, that is the rent gap, may not exist. From a neoclassical perspective, this phenomenon can be viewed as the result of spatial externalities or spatial price equilibrium.

In short, Smith fails to analyze the changes in the components of ground rent due to capital depreciation, urban expansion, and the erection of a new structure. Landowners will visualize the housing market conditions so that they will ask for a ground rent level close to the highest rent attainable given the locations and the potential uses of the land parcels. If the ground rent derived from the potential best use is going up, the capitalized ground rent, given an existing structure, may also increase. This trend implies that the rent gap may not exist. It should be noted that each land parcel has not been given any monopoly conditions and no landed sub-class is involved.

REFORMULATION OF THE RENT GAP NOTION

In the traditional Marxist analysis, landowner and building owner (capitalist) are treated as separate classes. They both exploit wage labor and appropriate surplus value in terms of profit and rent. Landowner and capitalist will struggle for their shares of surplus value. Thus far in this discussion, this relation between these two classes has been assumed. The returns to both classes are clearly differentiable and each class will fight for the highest return. On the other hand, landowner and building owner could be the same person. In contrast to the first relation, the owner will receive a composite return that is partly from the land and partly from the building. Thus the objective of the owner is to seek the maximum level of this composite return, not from one or the other.

We have seen that if the first relation is taken, the concept of potential ground rent will fade out and the rent gap is minimal. Even if the rent gap exists as Smith claims, it is not within the landowner's ability to recapture the gap through gentrification, because the landowner does not own capital for construction. Moreover, as Muth has pointed out, "raw land costs are only about one-tenth of the total cost of these houses."[13] In other words, landowners should have a relatively small share of the composite rent. Under this circumstance, the capitalist or building owner rather than the landowner should be the active participant of the gentrification process. It is ironic that the title of Smith's paper, "Toward a Theory of Gentrification", refers to the theory of the rent gap, and its subtitle, "A Back to the City Movement by Capital, not People", points out that the capitalist is the major actor in the process.[14]

However, in the urban environment, it is not uncommon that the landowner is also the building owner. Recall that rent and profit shares are determined by both the amount of capital input to land and the class struggle between the capitalist or building owner and the landowner. If the landowner and the building owner are the same person, the differentiation between these two types of return will become blurred. Under this circumstance, the owner's action can be analyzed from two perspectives. When the structure deteriorates, he may want to allocate his return to rent so that the ground rent is made equal to the level of ground rent obtained from similar sites. Then, in order to regain higher profit, he will invest more capital, by renovation or reconstruction, to recapture the profit derived from the best use of the land. In this situation, no rent gap of any kind emerges. It is similar to the case in which the landowner and the building owner are separate people, and the landowner has overwhelming power to ask for rent at the market level for that location.

From another perspective, the owner may do his bookkeeping by allocating his return to capital at the prevailing rate of profit while keeping down the ground rent level, which should not be lower than

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[13]Richard Muth, "Models of Land-Use, Housing, and Rent: An Evaluation," *Journal of Regional Science*, 25 (1985): 595.

[14]Smith, op. cit., footnote 1, p. 538.

the level of *DR I*. Then, in order to recapture the rent gap, which is actually the *DR II* gap and the profit gap (Figure 1), the owner has to put money into the existing structure, or build a new structure so that a higher composite rent can be obtained.

In short, the rent gap can be viewed as the difference between the highest *DR II* and return to capital attainable, and the existing *DR II* and profit given the location. Also, a theory of gentrification cannot be formulated unless capitalists are also treated as active agents. This, in fact, is already implied by the subtitle of Smith's paper.[15]

SOME COMPLICATIONS IN INTERPRETING THE RENT GAP

The above analyses are restricted to a simplified urban setting in which no explicit social structure (landlords and capitalists are treated playing different roles, but not as classes) and no uniqueness of each land parcel is assumed. It is also assumed that there are no barriers hindering capital movement. These assumptions are used because Smith thinks that the determinants of potential ground rent are urban development and expansion.[16] Consequently, differential rents are the foci of discussion rather than monopoly and absolute rents, which are primarily created due to social structure. But if we relax all these restrictions, monopoly rent, class-monopoly rent, and absolute rent may arise. Lauria[17] incorporates these types of rent into his analyses of redevelopment, but he did not address the rent gap issue.

Edel[18] has a very detailed elaboration on the conditions under which absolute rent will arise. Barriers established by financial institutions will also produce absolute rent. The logic of the existence of absolute rent is that the supply of the commodity concerned cannot be raised due to certain restrictions. In the meantime the demand may be rising. As a result, surpluses are extracted as

[15]Ibid., p. 538.

[16]Ibid., p. 545.

[17]Mickey Lauria, "The Implications of Marxist Rent Theory For Community-Controlled Redevelopment Strategies," *Journal of Planning Education and Research* 4, no. 1 (1984): 16-24.

[18]Matthew Edel, "Marx's Theory of Rent: Urban Applications," *Kapitalistate* 4-5 (1976): 100-124.

absolute rent. According to Harvey and Lauria, it is not unusual that absolute rent exists in the urban land market. This implies that absolute rent can be part of the capitalized ground rent, which increases whenever capitalists have difficulty investing in the property. If redevelopment occurs, the benefit of capturing absolute rent will disappear. Thus, a location's absolute rent is an existing return that responds to demand in the market place, and it will not affect the level of potential ground rent. In fact, absolute rent will raise the level of capitalized ground rent and will narrow the rent gap if it exists.

On the other hand, monopoly rent may have effects on both the capitalized ground rent and the potential ground rent. The landlord of a land parcel may be in a monopoly exchange situation due to the "built environment," but the monopoly situation may vanish if redevelopment on that land parcel takes place. This implies that the potential ground rent may diminish due to the elimination of monopoly conditions. As a result, the rent gap is reduced. The landlord may be able to retain the monopoly conditions even if a new structure is built on it. In this case, the rent gap may be of the same magnitude. Lastly, monopoly conditions may be created by investing in old structures; thus, monopoly rent may raise the potential ground rent and widen the rent gap.

Lauria[19] has discussed the importance of absolute rent and monopoly rent, and he provides strategies to minimize the extraction of these two types of rent during the process of neighborhood redevelopment. However, he does not investigate their effects on the rent gap, which is the major initiative of gentrification.

SOME PARALLEL DEVELOPMENT IN THE "LIBERAL" APPROACH

I would like to identify two deficiencies of the rent gap theory which have been taken into consideration by liberal economics. Firstly, gentrification should include both renovation and reconstruction. It seems that Smith does not make a clear distinction between these two methods of gentrification, nor does he say that his theory can explain which one of these should take place.

[19] Lauria, Op. cit., footnote 17, pp. 16-24.

Secondly, Smith argues that gentrification will occur when the rent gap is large enough.[20] Even though the notion of rent gap is not clear, especially when the "potential ground rent" is the same as capitalized ground rent, we can still think of the gap as the potential return from redevelopment or renovation. However, the cost of demolition in the case of redevelopment and the cost of renovation are not taken into account. The net gain from gentrification should be the "gap" less either one of the above costs.

Literature on land economics includes at least one scheme that is very similar to the rent gap theory. In Hallett's framework of redevelopment, he differentiates between building value and site value.[21] Building value is the capitalized value of the net rent which is the gross rent less the maintenance cost. Site value is the residual of the building value after the cost of construction is paid. The payment to the site value, or the premium, is the value of the ground rent capitalized at the appropriate interest rate for the length of the lease.

Hallett argues that when the site value is higher than the current building value plus the cost of demolition, redevelopment becomes profitable. He expresses the condition as follows: Let Ve be the capital value of existing building, D be the cost of demolition, and S be the site value. The redevelopment is profitable if $Ve + D - S < 0$. If S is equal to the ground rent (GR) received by the landowner, then $Ve + D < GR$ or $Ve < GR - D$. In other words, either the existing return to the building owner is not enough to pay any rent to the landowner, or the cost and the loss of removing the existing building is less than the benefit of renting the land to another user. Figure 2 depicts the situation precisely. It is assumed that because of structural depreciation building value (BV) will decrease over time. Figure 2 by no means describes the trends of site value and building value. Both of them may rise.

Hallett continued by arguing the following: If Vp is the capital value of proposed building, Cp is the cost of proposed building, then $S = Vp - Cp$ and $Ve + D < Vp - Cp$ describes the requirement for

[20]Smith, op. cit., footnote 1, p. 545.

[21]Graham Hallett, *Urban Land Economics: Principles and Policy* (London: The Macmillan Press, 1979), pp. 67-82.

profitable redevelopment. Here, Hallett uses the same site value for both the existing building ($Ve + D < S$) and the potential building ($Vp - Cp = S$). His analysis confirms what I proposed earlier that the rent gap depicted by Smith may not exist, either theoretically or in reality, because site value (and ground rent) would adjust to the urban setting over time.

Hallett continues to discuss how owners decide to choose between redevelopment and renovation. He argues that "if the modernized building has a life of n years, modernization will be more profitable than rebuilding if the cost of modernization plus the present value of the cost of rebuilding in n years is less than the present cost of rebuilding."[22] He is, in fact, comparing the cost of renovation and reconstruction. But the life of the structure and the interest rate are critical factors in determining the profitability.

CONCLUSION

It is apparent that there is a gap between the return from the best use of a piece of land and the existing use, but the gap is not simply the rent gap proposed by Smith. The gap may consist of ground rent (mostly *DR II* which arises due to the difference in the amount of capital input) and profit for the capitalist. Since the existing structure is deteriorating, it cannot command the highest return from the tenants. Part of the loss will be actualized in terms of lowered profit, and part will be in terms of lowered ground rent. If urban development is the prevailing phenomenon, as Smith has claimed, then the level of ground rent may even rise. As a result, the gross rent may not drop. To recover the capital loss, either renovation or reconstruction is required. The gap of the composite return is in fact a gap of the composite rent. We may name the gap of the composite return the "return gap" or the "composite rent gap" in contrast to Smith's rent gap. If we take into consideration the social relations and historical development of the location, the composite rent gap may be composed partly of monopoly rent and/or class-monopoly rent, but not absolute rent.

[22]Ibid., p. 72.

The magnitude of the composite rent gap may indicate the pressure for gentrification exerted on the landowner and/or building owner. From the perspective of carrying out empirical studies, the concept of composite rent gap is much easier to operationalize. It also has the advantage that no differentiation among the types of relation between landowner and building owner are required. However, the notion of a composite rent gap has to be included in the analysis of gentrification.

This paper is limited to the discussion on the theoretical validity of Smith's rent gap theory. Further investigations should focus on the reasons or forces which generate the composite rent gap. A theory of gentrification is not successfully formulated unless these underlying factors are incorporated into the theory.