Gentrification and Care: A Theoretical Model

Laura Nussbaum-Barbarena
lnussbaumbarberena@roosevelt.edu

Alfredo R. M. Rosete
arosete@ccsu.edu

ABSTRACT

Gentrification and care are two topics that are rarely brought into conversation in the economics literature. Often, gentrification is studied in relation to displacement, housing prices, property values, and segregation. The economics of care, on the other hand has often been occupied with measurement and valuation of women's labor on a global, de-regulated market. Anthropologists and other social scientists, however, have studied the collaboration and care work that women foster beyond the household. The sharing of unpaid social reproductive labor among networks of women/families is key to sustaining the coherence of low-income communities. If gentrification causes displacement, then, an episode of gentrification can cause care networks to disperse. To bridge the largely parallel literatures on gentrification and care work, we present a mathematical model of gentrification where agents base their decision to move on both the price of housing, and the price of care. The price of care is offset by the ability of agents to form care networks. Our models suggest that gentrification disperses the care networks of the poor, increasing their vulnerability to rising housing prices. Thus, decisions to move are predicated on a particular 'social price point'-a decision that is not only economic but reflects increasing geographic distance from those who collaborate to accomplish social reproductive and other tasks of community maintenance.

Keywords: Gentrification, Displacement Care Work
JEL Codes: D1, R23, R31, Z13

I. INTRODUCTION

In the Economics literature, gentrification refers to the process by which a neighborhood's housing stock and amenities change, attracting new residents. Most commonly, these changes correspond to the displacement of residents with less wealth in favor of wealthier transplants. While numerous authors have theorized and tested Gentrification's effects on racial segregation, ethnic disparities, and housing prices, few have explored its possible implications for a community's access to care work. We take care work to broadly mean any work done that sustains

the growth or living of other human beings. These can include childcare, tutoring, and elderly care. A distinct feature of care work is that it often comes from both market and non-market sources. Moreover, as feminized labor, both are overlooked as central features of everyday life. Kin networks and networks built among friends often provide a ready set of possible caregivers. In surviving or thriving marginalized communities, unpaid care work is essential and plays an outsized role. An episode of gentrification, then, may cause these networks to fracture when residents move, limiting the access to care for those who are dependent upon non-market sources. Surprisingly, this intuitive possibility has not, to our knowledge, been explored by economists and social scientists writing on gentrification.

To bridge the largely parallel literatures on gentrification and care work, we present a mathematical model of gentrification where agents base their decision to move on both the price of housing, and the price of care. The price of care is offset by the ability of agents to form care networks. Our models suggest that gentrification disperses the care networks of the poor, increasing their vulnerability to rising housing prices. Thus, decisions to move are predicated on a particular 'social price point'-a decision that is not only economic but reflects increasing geographic distance from those who collaborate to accomplish social reproductive and other tasks of community maintenance.

Insofar as care networks serve to anchor communities, they may also offer resilience in the midst of displacement pressures. At the same time, the presence of these networks may also dull or partially absorb the shock of rising prices. As turnover takes several years, residents can rely on the same networks to provide resources as much as to support them as they move among housing options and prices rise unevenly. Contesting the 'global' narratives of neoliberalism, Anna Tsing's argues that late capitalism's regime of accumulation by dispossession experiences friction in

localized arenas, is useful here. We can argue that precisely the development of social networks, and the gendered labor performed become sources of friction, slowing decisions to leave, or displacement (Tsing 2005). Our work, then, offers a feminist lens on gentrification. It reveals the way that care networks, as invisibilized networks of feminized labor, play key roles in resilience, decisions to leave, and selection of destination.

While our model extends the literature on gentrification, it has two features that are consistent with studies in both economics and anthropology. The first of these features is the dynamics of housing prices and displacement. We model housing prices to account for the exogenous characteristics of the neighborhood, and the resulting congestion for housing that results from an influx of new residents. Consistent with the economic theory of gentrification, an influx of wealthier residents to a relatively cheaper neighborhood triggers a rise in the price of housing. If the rise in housing prices is large enough, poorer residents tend to move out. Guerreri et al. (2013) call this 'endogenous gentrification', where the resulting shift in the composition of the neighborhood stems from the decision of wealthier home buyers to move in, and poorer residents to move out. This movement of people also has a racial dimension as theorized by Banzhaf and Walsh (2013). They find that segregation along racial lines can result when one ethnic group is systematically wealthier at every income strata. Further, their model also suggests that poorer neighborhoods tend to remain poor since the wealthier members of the poorer ethnic group move into wealthier neighborhoods. For anthropologists, the racial dimension of displacement has two competing effects on the desirability of a neighborhood. Anthropologist Jess Mumm (2014) refers to the process that enables the process of gentrification and the accompanying speculation and displacement as a "racial fix." In neighborhoods where the emblematic resident is a person of color, home values remain low and public services weak, even when strong, if overlooked, social

and cultural institutions emerge. These same features, in addition to low prices, attract white residents. When they move in, they change the neighborhood's emblematic racial identity, encouraging speculation driving property values up. In turn, this encourages further white in-migration, as a changing neighborhood offers strong returns on investment, improved public programs and 'rehabilitated' housing stock. In turn, this drives the continuing displacement of communities of color. Displacement may also take place along class lines, however, as a contested effect as McKinnish et al. (2010) suggest. They find evidence that wealthier members of co-ethnic communities may also displace poorer ones.

The second feature is the price of care, which we model as having both a market and a social component. The market component is taken as exogenous, while the social component is dependent on the capacity of an agent to form care networks. Feminist Economists have contributed much to estimating the price of care through time-use and opportunity cost (see e.g. Folbre, 2006), and arguing that care has a fundamentally social dimension (see eg. Perrons,2000 ; Warren, 2010). Both of these strands have been used to argue for public policies that allow families greater access to care work which would enhance the well-being of households by empowering the primary providers of care through time for schooling (Herbst and Tekin, 2010) and enhancing their income earning capacity (Tekin, 2005). Anthropologists have also studied the impact of collaboration and care work that women foster beyond the household. The sharing of unpaid social reproductive labor among networks of women/families is key to sustaining the coherence of low-income communities alongside a social safety net (Gonzalez de la Rocha, 2001). Notably, Gonzalez de la Rocha points out that pooling resources supplements some, albeit minimal access to public services. However, she argues that this survival strategy has limits: once this safety net is eroded, even sustaining care networks becomes untenable.

This social dimension of care work is also possibly more salient among migrant communities in the United States. Flores and Benmayor (1997) characterize migrant neighborhoods as a (reconstituted) constellation of community members, households and institutions[1]. As racialized groups vie for a 'right to the city', a confluence of pull factors influence settlement patterns. Early migrants juxtapose their own affiliations against neighborhood characteristics: proximity of industry, cultural and religious institutions, familial and co-national/ethnic networks, class and citizenship status make-up, and finally, affordable residences. Subsequent migrants often seek out these existing co-ethnic communities (see e.g. Hamilton and Chinchilla 1991; Menjivar 2000). This is fundamental to most migrants' survival: offering knowledge, cultural capital and a new site to pool resources. Given the responsibility of supporting family locally and abroad, in addition to the relative vulnerability of workers in the U.S. labor market, it is common for migrant families to re-constitute, even institutionalize, networks of care and exchange. However, Menjivar (2000) argues that networks abroad have limitations and when the market and housing is saturated, pooling resources is perceived to entail greater personal risk. This exchange, as well as its decline, is often overlooked. First, migrant neighborhoods are often mischaracterized as lacking strong social networks. Furthermore, care work itself is feminized labor, it remains invisibilized. With these factors in mind, we should expect that residents weigh the cost of disbursing networks, against the expense of moving to less expensive areas. The decision takes place at a point where these encounters reach a critical low and cash expenditure reach a peak to meet market rate costs of living.

The paper is organized as follows: Section II sets out the model and derives its main results. In Section III, we discuss the implications of our findings for research on gentrification and other related social phenomena.

II. GENTRIFICATION AND CARE-THE MODEL

a. Preliminaries

Consider a population (P) divided into rich (r), middle (m) and poor (p). There are two neighborhoods, 1 and 2 indexed by j. The price of housing in each neighborhood is given as $p_j=\rho_j(1+\frac{R_j}{H_j})$. We can think of ρ_j as the base price of housing in neighborhood j representing its value independent of the amount of residents. These can include its proximity to certain desirable locations and other amenities. Assume that $\rho_1 < \rho_2$. Thus, the housing stock in neighborhood 2 commands a higher exogenous value than neighborhood 1. R_j is the total number of residents in neighborhood j, while H_j is the housing stock[2]. Thus, $\frac{R_j}{H_j}$ is a measure of congestion in neighborhood j. The equation for p_j suggests that the housing price in both neighborhoods rise as the number of residents increase.

The stratification of classes is given according to wealth (w_i). Specifically:

$w_p < 2\rho_1 \leq w_m < 2\rho_2 < w_r$

These inequalities imply that a poor person cannot afford to live in a completely congested neighborhood 1, while a middle-income person cannot afford to live in a completely congested neighborhood 2. Wealthy persons can afford both neighborhoods and pay for the price of care (p_c). Let N_{ij} denote the number of i-types in neighborhood j. The proportion of i-types in neighborhood j is given by $n_{ij} = \frac{N_{ij}}{R_j}$. Note that $P = R_1 + R_2 = \left(N_{p1} + N_{m1} + N_{r1}\right) + \left(N_{p2} + N_{m2} + N_{r2}\right)$. For convenience, we can also denote $N_{-pj} = N_{mj} + N_{rj}$, which stands for the *non-poor* persons in neighborhood j.

The price of care is given as:

$$p_c = \rho_c - v_{ij}(n_{ij})$$

In this equation, $v_{ij}(n_{ij})$ is the person of type i's ability to form care networks. We make two assumptions about $v_{ij}(n_{ij})$.

i. $\frac{dv_{ij}(n_{ij})}{dn_{ij}} > 0$

ii. $v_{pj}(n_{pj}) > v_{mj}(n_{mj}) \geq v_{rj}(n_{rj}) \geq 0.$

iii. $0 < v_{ij}(n_{ij}) \leq \rho_c$

Assumption (i) says that the ability of a person who is a member of group *i* in neighborhood *j* increases with the presence of persons of similar wealth in neighborhood *j*. Assumption (ii) suggests that as wealth rises, the ability to form care networks falls. Assumption (iii) simply states that the value of the care network is no greater than the actual market price of care. Here, ρ_c can be thought of as the market price of care when it is provided by someone who does care work for money. The better a person is in building care networks, the greater the reductions in the price of care. By modelling the price of care in this way, we are de facto assuming that poorer residents are better able to build care networks. This is assumption is plausible considering the anthropological research cited above, and the intuition that poorer residents need to build these networks in order to compensate for their lack of funds. Wealthier individuals, because they can afford the market price of care work do not need to make the same level of investment in building care networks. Assumptions (i)-(iii) ensure that the price of care is decreasing in n_{ij} as in figure 1.

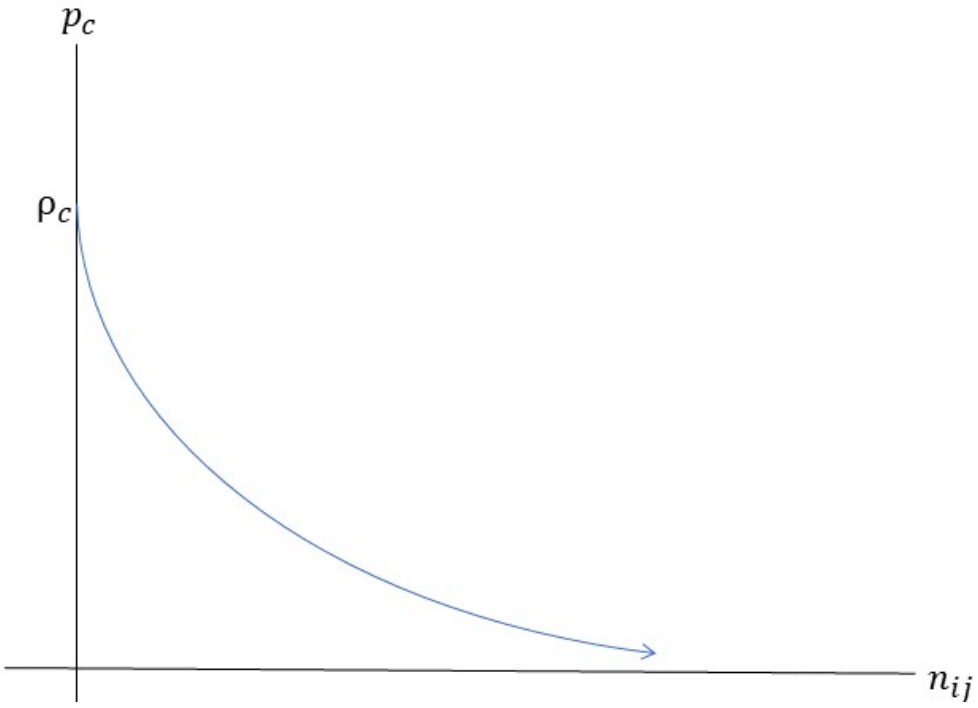

Figure 1*:* The price of care for a person of *i*-type as a function of the proportion of similar types in neighborhood *j*.

The representative agent has a Cobb-Douglas utility function: $u_{ij}(x,c)=x^a c^{(1-a)}$ where, $0<a<1$, x is a consumption good with unit cost and c is their consumption of care work[3]. We can assume that not being able to locate in either neighborhood generates a utility of 0. The budget constraint is $w_{ij}-p_k=x+p_c c$. Using standard optimization, the representative agent will consume the following levels of both goods[4]:

$$x^* = a(w_i - p_j), \qquad c^* = (1-a)\frac{(w_i - p_j)}{p_c}$$

Thus, the representative agent's utility with equilibrium consumption of both goods is:

$$u_{ij}(x^*, c^*) = (w_i - p_j)\frac{A}{p_c},$$

(1)

where A=$a^a(1-a)^{(1-a)}$.

b. The Move-In Decision and Results

To illustrate the existence of an equilibrium number of residents in either neighborhood, suppose that housing is cheaper in neighborhood 1. Let p_1^0 be the initial housing price. When the representative agent decides to move from neighborhood 2 to 1, they then decide to give up their established care networks. Thus, the relevant comparison for a person deciding to move to neighborhood 1 is whether $u_{i1} \geq u_{i2}$ or:

$$(w_i\text{-}p_1)\frac{A}{\rho_c{}^{(1-a)}} \geq (w_i\text{-}p_2)\frac{A}{(\rho_c - v_{ij}(n_{i2}))^{(1-a)}}$$

Let $\Delta_c = 1 - \frac{v_{ij}(n_{ij})}{\rho_c}$. We can think of Δ_c as the proportional reduction to the cost of care that comes from being in a place where one forms care networks. The above equality can then be rearranged, resulting in:

$$\frac{p_2 - \Delta_c p_1}{(1-\Delta_c)} \geq w_i$$

That is, there is an upper wealth threshold for those that would move to neighborhood 1 from neighborhood 2. This says that a wealthy enough resident of neighborhood 2 who has some care networks in neighborhood 2 will not have an incentive to move to neighborhood 1 due to lower housing prices. Moreover, any person in neighborhood 2 whose wealth is greater than this threshold will not move to neighborhood 1.

Assume that for both neighborhoods, $\frac{R_j}{H_j} > 0$, so that each experiences some degree of congestion. Further, assume that, initially, $p_1 < p_2$. It is possible, in this case, that neighborhood

1 is more congested since $\rho_1 < \rho_2$. In general, the marginal person that will move to neighborhood 1 when $u_{i1} = u_{i2}$ or when

$$(w_i\text{-}p_1)\frac{A}{\rho_c^{(1-a)}} = (w_i\text{-}p_2)\frac{A}{(\rho_c - v_{ij}(n_{i2}))^{(1-a)}}$$

Now, let $h_1 = \frac{\rho_2 H_1}{\rho_2 H_1 + \Delta\rho_1 H_2}$. We can use the fact that $R_2 = P - R_1$ to rearrange the equilibrium condition to derive the equilibrium population in both neighborhoods:

$$R_1^* = h_1(P + H_2) - (1 - h_1)H_1 - w_i\frac{(1 - \Delta_c)}{(\rho_2 - \Delta_c\rho_1)}$$

The equilibrium levels simply suggest that neighborhood 1 will end up with a proportion of the population which is limited by the housing stock in both neighborhoods and the opportunity cost of giving up one's care networks and paying the full market price for care. This equilibrium has several characteristics given by the following results:

Result 1: The equilibrium constitutes an increase in the price of housing for neighborhood 1 or, $p_1(R_1^*) > p_1^0$. The reason for this is the following: Suppose it was not true. Then, there would be some residents in neighborhood 2 who can benefit from moving to neighborhood 1. If so, then R_1^* is not an equilibrium.

Result 2: The equilibrium generates an increase in the population of neighborhood 1 or $R_1^* > R_1^0$. This is because, according to Result 1, $p_1^* = \rho_1(1 + \frac{R_1^*}{H_1}) > \rho_1(1 + \frac{R_1^0}{H_1}) = p_1^0$, which simplifies to $R_1^* > R_1^0$.

Result 3: The amount of poor inhabitants of neighborhood 1 will decrease. This result follows since the housing prices increase. Now, consider a resident, *l*, on the margins so that $u_l = (w_l\text{-}$

$p_1^0)\frac{A}{(\rho_c - v_{ij}(n_{i2}))^{(1-a)}}$=*0.* This agent is poor since w_l<$2\rho_1$. With a rise in housing prices to p_1^*, $u_l \leq 0$. Thus, person *l* cannot stay in neighborhood 1. In addition to residents with this level of wealth, all residents *k* with $p_1^0 \leq w_k < p_1(R_1^*)$ will exit neighborhood 1.

Result 4: The equilibrium generates a fall in the welfare of the poor who are dependent on care networks. To show this, note that

$$\frac{du_{p1}}{dn_{p1}} = \frac{du_{p1}}{dp_c}\frac{dp_c}{dv_{p1}}\frac{dv_{p1}}{dn_{p1}}$$

Now, $\frac{du_{p1}}{dp_c} = -(1-a)\frac{(w-p_1)}{p_c^{(2-a)}} < 0$ and $\frac{dp_c}{dv_{p1}}\frac{dv_{p1}}{dn_{p1}} < 0$ by the definition of p_c and the assumption (i) on $v_{ij}(n_{ij})$. So, $\frac{du_{p1}}{dn_{p1}}$ >0. This means that a reduction in n_{pj} will result in a fall of welfare for all remaining *p* residents after the move in decision.

The dynamic effects of the move-in decision are partially illustrated in figure 2. The right quadrant in this figure portrays the behavior of the price equations with respect to the populations in both neighborhoods. The left quadrant depicts the utility of the representative agent who are poor ($u_{p1}(p_1)$) and non-poor ($u_{-p1}(p_1)$). The lower price in neighborhood 1 results in an influx of residents depicted by arrow (1). This influx results in a rise in the housing price for neighborhood 1 from p_1^0 to p_1^*, given by arrow (2). For a representative non-poor person, the rise in prices represents a fall in utility, from $u_{-p1}(p_1^0)$ to $u_{-p1}(p_1^*)$ (arrow (3)). However, the poor resident's utility falls past 0 (arrow (4)).

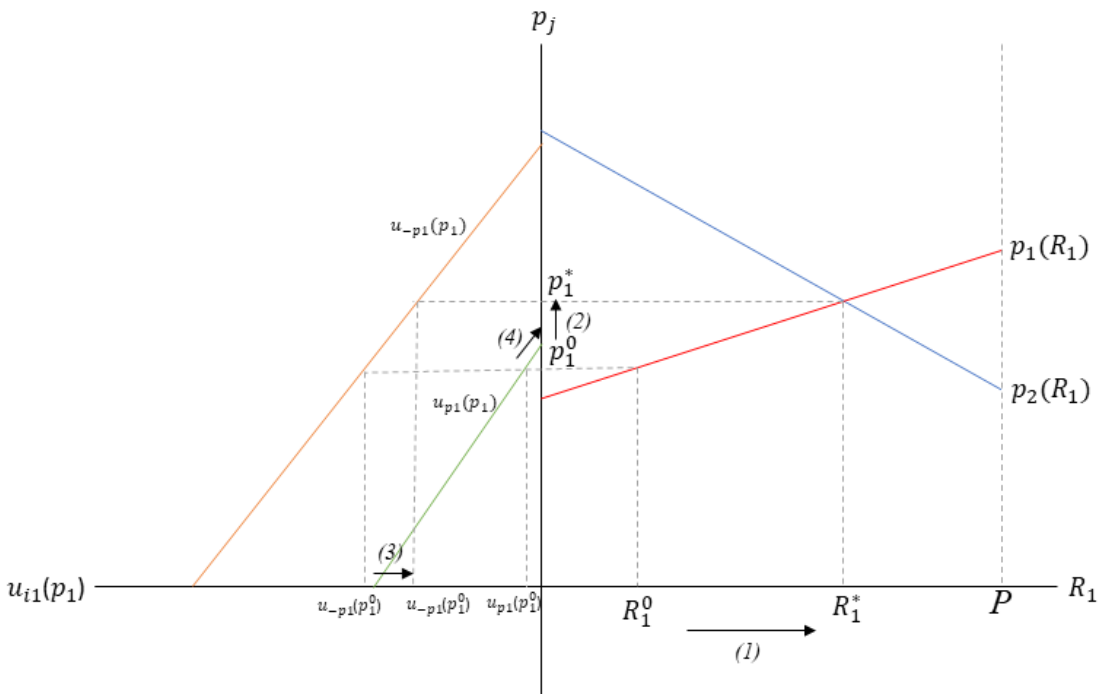

Figure 2: The dynamics of the move-in decision

It is notable from the four results which characterize equilibrium that, while there is an increase of residents in neighborhood 1, this increase in residents comes at the expense of the poor. This happens in two ways. First, poor residents are driven out of the neighborhood due to a rise in the housing prices. Second, residents who are now at the margins with the new housing prices end up having to pay more for care due to a rise in the cost of care. Our model, however cannot claim that the rise in the price of care can drive out current residents. These points are summarized in Result 5:

Result 5: In this model, the rise in the price of care work can make the decision to move out of a neighborhood faster, however, it will not push out someone from a neighborhood. This is because, the level of care can be adjusted so that the person consumes some small amount of care while devoting their income mostly to rent and consumption. To see this, consider equation (1). As p_c

gets larger, $u_{ij}(x^*, c^*)$ approaches zero asymptotically. Thus, the representative agent's utility will fall but it will not drive them to move.

Result 5 can be illustrated with Figure 2, with a slight modification. Let $u_{-p1}(p_1)$ represent the utility of the poor resident of neighborhood 1 *before the influx* of new residents, and $u_{p1}(p_1)$ represents the utility of the poor agent who has lost their care network in neighborhood 1. If they did not lose their care network, then, it is possible that they could withstand an increase in price that lowers their utility from $u_{-p1}(p_1^0)$ to $u_{-p1}(p_1^*)$ (arrow (3)) . However, losing the care network can drive their utility closer to the origin since $u_{-p1}(p_1)$ shifts to $u_{p1}(p_1)$. In this case, the increase in housing prices will cause them to exit the neighborhood.

III. DISCUSSION

In this paper, we constructed a model that integrates the issue of gentrification and access to care. Our model is reconcilable with numerous findings in the literature. Namely, that gentrification tends to displace poorer residents, and raises housing prices. However, we depart from this literature by introducing the price of care to a resident's utility function. Because of the need to access care, the rise in prices that can fracture a person's care networks can cause additional harm to a poor resident. This is because wealthier residents will drive out poorer ones in the process of gentrification. Consequently, other poorer residents who can stay in the neighborhood lose a source of care work.

These results suggest that the findings of the literature on gentrification and the more recent 'moving to opportunity' experiments should be taken with some caution. In both these literatures, the effects of urban renewal are two sided. On the one hand, poorer residents do get displaced, but

on the other, remaining residents receive the added benefit of better public schools, parks, and less crime. Further, children who have a longer exposure to better neighborhoods tend to fare better in terms of college attendance and long-term incomes (Chetty et al. 2016). However, our work suggests that another factor which could be important in understanding the welfare of people as they move in and out of neighborhoods is their access to care. This is similar to the point made by Barnhardt et al. (2017) who use evidence from a housing experiment in India to argue that considerations such as social networks are important in a household's choice of location. Considering the evidence on the importance of long-term access to care provided by Felfe et al. (2015) and De Marco et. al (2015), even temporary fractures in care networks can be quite consequential[5].

While our model integrates the two problems of care and gentrification, it is not able to treat the racial dimension of gentrification. This is an essential extension. In a country like the United States, disparities in wealth are correlated with disparities among racial groups. Our framework would benefit by including racial and ethnic groupings to our income-based stratification as in Banzhaf and Walsh (2013). Among the outcomes that should come out of such a model is the observation by McKinnish et al. (2010) who demonstrate that gentrification often displaces low-income members of a racial group as those that move in.[6] Wealthier members of a racialized community may usher in infrastructure and institutions that still participate in displacing those without the resources to meet rising costs--popularly dubbed *gentefication*. . However there are scholarly and mainstream debates as to whether co-ethnics play as significant a role in displacement. These debates point to the possibility that if wealthier members of a community are part of care networks, g*entefication*- a term used by Delgado and Swanson (2019) and Arellano (2018) to signify the possibility of gentrification enhancing social networks that reproduce a

neighborhood's culture and institutions--can conserve the care network anchor. The *gente* in this case are younger co-ethnics of professional classes that have a stake in maintaining the cultural characteristics of the neighborhood. Gentefication is interpreted as a potentially positive force when the gentefiers have deep ties to the community and are seen to continue to contribute to pooling.

Another crucial limitation of our model is that it is built to tackle the short-run, since we model the housing stock as constant throughout. This is because we are concerned about the immediate effects of gentrification that can fracture existing care networks. In the long-run, other possibilities can arise to attract new residents. However, it is not likely that an episode of renewal will be followed by a fall in a neighborhood's property values, and thus attract poorer residents. Thus, care networks may change, but the impact on new, more affluent residents would not be as severe as it was for the poor.

REFERENCES

Arellano, Gustavo. May 16, 2018. Column: Can 'Chipsters' And Barrio Activists Find Common Ground? Retrieved from: https://www.latimes.com/opinion/op-ed/la-oe-arellano-gentefication-20180516-story.html

Banzhaf, H. S., & Walsh, R. P. (2013). Segregation and Tiebout sorting: The link between place-based investments and neighborhood tipping. *Journal of Urban Economics*, *74*, 83-98.

Chetty, R., Hendren, N., & Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment. *American Economic Review*, *106*(4), 855-902.

De Marco, A., Vernon-Feagans, L., & Family Life Project Key Investigators. (2015). Child care subsidy use and child care quality in low-wealth, rural communities. *Journal of Family and Economic Issues*, *36*(3), 383-395.

Delgado, E., & Swanson, K. (2019). Gentefication in the barrio: Displacement and urban change in Southern California. *Journal of Urban Affairs*, 1-16.

Felfe, C., Nollenberger, N., & Rodríguez-Planas, N. (2015). Can't buy mommy's love? Universal childcare and children's long-term cognitive development. *Journal of population economics*, *28*(2), 393-422.

Folbre, N. (2006). Measuring care: Gender, empowerment, and the care economy. *Journal of human development*, *7*(2), 183-199.

Flores, W. V., & Benmayor, R. (Eds.). (1997). *Latino cultural citizenship: Claiming identity, space, and rights*. Beacon Press.

de la Rocha, M. G. (2001). From the resources of poverty to the poverty of resources? The erosion of a survival model. *Latin American Perspectives*, *28*(4), 72-100.

Guerrieri, V., Hartley, D., & Hurst, E. (2013). Endogenous gentrification and housing price dynamics. *Journal of Public Economics*, *100*, 45-60.

Hamilton, N., & Chinchilla, N. S. (1991). Central American migration: A framework for analysis. *Latin American Research Review*, *26*(1), 75-110.

Herbst, C. M., & Tekin, E. (2010). Child care subsidies and child development. *Economics of Education review*, *29*(4), 618-638.

McKinnish, T., Walsh, R., & White, T. K. (2010). Who gentrifies low-income neighborhoods?. *Journal of urban economics*, *67*(2), 180-193.

Menjívar, C. (2000). *Fragmented ties: Salvadoran immigrant networks in America*. Univ of California Press.

Mumm, J. S. (2014). *When the white people come: Gentrification and race in Puerto Rican Chicago*. Northwestern University.

Perrons, D. (2000). Care, paid work, and leisure: rounding the triangle. *Feminist Economics*, *6*(1), 105-114.

Tekin, E. (2005). Child care subsidy receipt, employment, and child care choices of single mothers. *Economics Letters*, *89*(1), 1-6.

Tsing, A. L.(2005). *Friction: an ethnography of global connection*.

Warren, T. (2010). Work time. Leisure time. On women's temporal and economic well-being in Europe. *Community, Work & Family*, *13*(4), 365-392.

Barnhardt, S., Field, E., & Pande, R. (2017). Moving to opportunity or isolation? network effects of a randomized housing lottery in urban india. *American Economic Journal: Applied Economics*, *9*(1), 1-32.

[1] Namely, people work and live in places with few benefits, but are able to survive by pooling material goods, social practices, knowledge and distinct cultural practices. This creation of belonging is captured in the concept of 'cultural citizenship'. This collective work often marks neighborhoods as more than locations but sites for nostalgia of organized immigrant communities.

[2] The fixed level of housing in each neighborhood suggests that this model is built for the *short-run.*

[3] Admittedly, the Cobb-Douglas specification has a rather strong implication that those who do not consume and care ($c=0$) have a utility of zero. Sufficiently heterogenous agents can be introduced by allowing for implicit functions. In this case the equilibrium level of x^* and c^* would still have the characteristics presented here. Namely, they both decrease with the price of housing and c^* would decrease with the price of care. We choose a representative agent in this framework to emphasize the heterogeneity due to wealth and in order to obtain closed-form solutions.

[4] This comes from solving the optimization problem: $max_{x,c}\ u_{ij}(x,c)\ s.t.\ w_{ij}\text{-}p_k = x + p_c c$.

[5] These papers test the effects of childcare subsidies on children's long-term cognitive development. Both find that raising the access to care for poorer families enhances learning outcomes for children even in the long run.

[6] The term emerges in literature and articles in 2013. *Gentefication* mixes gentrification with the Spanish word *gente* (the people), often used as mi gente (my people)—to imply gentrification by younger generations of co-ethics who inhabit the professional classes.