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Coping with the costs of car dependency: A system of expedients used by low-income households on the outskirts of Dijon and Paris

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ABSTRACT

Living on low incomes and in a car-dependent area is often interpreted as a double burden for households, even if the two characteristics are often interdependent. While their capacity for mobility is lower, low-income households in outer suburban areas are nonetheless mobile. Their capacities in this domain should not be underestimated or overlooked. They can command a set of alternative practices or expedients to deal with car-related economic stress by a set of resources derived essentially from spatial proximity. This article aims to present and analyse the diversity of these expedients for the case of outer suburban areas around Paris and Dijon. The analysis of mobility adjustments by low-income households is based on interviews of 45 households in 2011.

Our results show that mobility expedients make it possible for low-income households to continue to reside in car-dependent areas by reducing their trips and by using local resources and networks to lower the costs of their car dependency. The contribution of our work is to show the intensity of these practices, which create a structured and collectively or socially built alternative system to solo car use.

1. Introduction

Car dependency is high in areas of low population density and so higher in outer suburbs than other residential areas (Dupuy, 1999; Newman and Kenworthy, 1989). Car mobility prevails in these outer suburban areas because resources are remote, destinations dispersed, alternative modes of transport inadequate or absent, and because automobiles provide far greater accessibility than other modes of transport (Handy, 2005; Cervero, 2002). However, the probable increase in the costs of car ownership and use may lead to a potentially problematic reduction in mobility for low-income households who already have difficulty meeting this costs (Low and Mosby, 2016; Delbosc and Currie, 2011; Coutard et al., 2004). This observation is made more acute because some outer suburbs are the preferential places of residence for low-income families who are drawn to them by lower land prices as observed for example in France (Cavailhès and Selod, 2003).

Many research papers point out the marked inequalities that low-income households suffer in terms of mobility and accessibility (Delbosc and Currie, 2012; Lucas, 2012; Currie et al., 2010). These inequalities are especially glaring in low-density areas remote from urban resources. They testify to the discrepancy between the inhabitants of such areas and (high- or low-income) households living in urban centres, which tend to enjoy greater mobility and access (Delbosc and Currie, 2011; Morency et al., 2011). Low-income outer-suburban households are less car-deprived than urban ones but they are more likely to face another car-related transport disadvantage: car-related economic stress (CRES) defined as the "the financial stress associated with owning and operating cars, and its negative consequences" (Mattioli and Colleoni, 2016). Their need for access to cheaper housing (Polacchini and Orfeuil, 1999) means that low-income households are especially exposed when they fail to anticipate the energy costs related to living in the outer suburbs (fuel, heating, etc.) (Ortar, 2016).

Our aim is to better understand how low-income households manage (or fail) to remain in less dense areas where they are more likely exposed to social exclusion via car dependency and CRES. As previously studied, low-income outer-suburban households resort to various means for their daily mobility practices (Lovejoy and Handy, 2011; Hine and Grieco, 2003), residential locations (Currie, 2010; Clifton, 2004), employment

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locations (Kawabata and Shen, 2007; Chapple, 2001) or exploitation of proximity (Delbosc and Currie, 2011). However, sectorial and specialized approaches generally miss the variety and combination of means used by individuals. We hypothesize that means or "expedients" to cope with car dependency and CRES differ and are variously effective from one situation to another. The term "expedients" here means makeshift or temporary resources for coping with difficulties arising. In this sense, it seems more appropriate than "strategies", "tactics" (De Certeaux, 1990), or "arrangements" (Ortar, 2016; Jouffe et al., 2015) for describing how low-income households manage to cope with car dependency.

Our study seeks first to identify such expedients in the French case on the basis of qualitative surveys conducted among low-income households in the outer suburbs of Dijon and Paris. Then it shall be seen how (far) these expedients form a system of alternatives to intensive and solo car-based mobility. Lastly, we shall evaluate whether this system is liable to moderate the threat of car dependency or car-related disadvantages for low-income households in outer suburban areas over the longer term.

2. From inequalities and costs of mobility to expedients: a review of the international literature about mobility of low-income (outer suburban) households

2.1. Unequally distributed automobile mobility: more costly automobile dependence for outer suburban low-income households

The share of car use has been constantly increasing in urban travel to the point that our societies are now characterized by their car dependency (Dupuy, 1999; Newman and Kenworthy, 1989). This dependency is manifested by a high level of car ownership and massive use of cars (Collet et al., 2012). The car enjoys a radical monopoly as defined by Illich (1974) by offering greater speed of travel and a higher degree of flexibility than other means of transport. Automobile mobility therefore imposes a standard in travel practices and has become the precondition for "normal" inclusion in social life, especially in low-density areas (Cervero, 2002).

Although motorization and automobile mobility are massive in developed countries, they are unequally distributed, especially with respect to income and localizations (Giuliano and Dargay, 2006; Pucher and Renne, 2003). Disparities in mobility by income can be observed in France (Grimal et al., 2013) and more patently in the United States (Renne and Bennett, 2014) or Australia (Delbosc and Currie, 2012). Cars weigh considerably on the budgets of the poorest (Demoli, 2015; Froud et al., 2002) forcing low-income households to make multiple adjustments: lower rates of ownership and multiple vehicle use (Collet et al., 2012), older and second-hand vehicles (Coulangeon and Petev, 2012; Bhat et al., 2009), etc. Inequalities by income also concern the type of insurance (Taylor et al., 2008), or the standard of maintenance and repair (Hivert, 2001). Motorized low-income households are also distinctive because they avoid toll roads and car parking charges (Taylor et al., 2008), which means they must make longer and more restricted trips. Low-income households make extremely sparing use of the car (Orfeuil, 2004) compared with richer households. All told, low-income households are less mobile (Olvera et al., 2004; Pucher and Renne, 2003), which reflects their limited accessibility to essential activities such as work (Kawabata and Shen, 2007), especially for women (Camarero and Oliva, 2008), food shopping (Clifton, 2004) or health care (Syed et al., 2013). Depending on the geographical zones or urban spatial structures, highly auto-oriented areas (Los Angeles or Dallas) vs metropolitan areas with high public transport usages (London, Tokyo or Paris), accessibility made possible by cars varies but remains greater than accessibility by public transport. It is a source of more or less marked inequalities for the least motorized households (Kawabata and Shen, 2006), which are often the least well-off both in the USA (Blumenberg and Pierce, 2012) and in France (Collet et al., 2012). Constraints and limits on low-income household mobility are particularly marked in outlying spaces, rural areas or outer suburbs, where car dependency is most pronounced (Morency et al., 2011), where public transportation is absent (Glaeser et al., 2008) and where car-less groups are fewer (Hubert et al., 2016; Mattioli, 2013). In France, disparities in access between central areas and urban outskirts are more marked and tend to grow (Caubel, 2006). In Canada, the location of a proportion of social housing on the outskirts explains a very limited level of access to services and facilities for social housing residents (Apparicio and Seguin, 2006). Thus the problems of transport and accessibility are more likely to be sources of social exclusion in rural and outer suburban areas than in central areas (Delbosc and Currie, 2011).

Social and geographical conditions combine to constrain daily mobility and limit the accessibility of low-income households, especially in outer suburbs. This context seems particularly significant because low-income households have a high propensity to settle in outer suburban areas. In most major US cities, the poor population is growing more rapidly in the suburbs than in the inner city (Kneebone and Garr, 2010). In France (Cavailhès and Selod, 2003) and Australia (Currie, 2010), the suburbs are experiencing rapid growth of low-income households, attracted by cheaper housing. This phenomenon is reflected, however, by increased strain on their budget because of costly automobile mobility among other expenses such as housing (Coulombel and Leurent, 2012; Dodson and Sipe, 2007; Polacchini and Orfeuil, 1999). Berri (2007) observes in the Paris Region that car ownership and operation amount to almost 10% of household budgets with big differences between the city centre (6%) and outer suburbs (11–14%) and between low-income (8%) and high-income households (10%). Outer-suburban low-income households spend a larger part of their budget on private transport (9%) than more urban ones (4%) especially because of car-related costs such as fuel expenses. That proportion is much lower proportion than for high-income households living in the same areas (13–17%). Rising spending on transport related to car-dependency and remoteness from the centre are then further sources of car-related economic stress (CRES) for outer-suburban low-income households as indicated by other studies in France (Nicolas et al., 2012). CRES is duplicated by another factor of energy vulnerability: vulnerability related to energy spending on housing such as heating and insulation, which is higher in less dense zones and for poorer households that cannot afford more energy-efficient housing (Maresca and Dujin, 2014). Outer-suburban low-income households therefore juggle with several forms of economic stress that build up, one related to spending on cars and the other to spending on housing (rent, mortgages or energy expenses), that involve making many arrangements to keep them down (Ortar, 2016).

2.2. Expedients for coping with automobile dependence: reduced travel, social networks, and staying local

Whatever the residential context, low-income households organize themselves in many ways so as to reduce or at least cope with the high costs of mobility, especially those related to cars. Low-income households manage to reduce CRES in many ways, which they consider far from perfect in that they aspire symbolically to the same automobility as other households (Taylor et al., 2008).

Trips are limited in number and distance according to a criterion of necessity, and precedence is given to the cheapest forms of transport. Car-solo based mobility is reduced and walking, public transport, and car sharing take priority (Blumenberg and Agrawal, 2014). Although they have higher fuel expenses, low-income households buy cheaper cars and use public transport more intensively than high-income households (Berri, 2007). For grocery shopping, the persistence of secondary strategies not involving cars (Clifton, 2004) also shows that owning a car is not enough to meet all the travel needs of a low-income household. Household members share car ownership and use.

Low-income households mobilize their social networks to increase their mobility (Hine and Grieco, 2003), which is reflected by intensive practices of car sharing or borrowing (Lovejoy and Handy, 2011; Charles and Kline, 2006). The spatial proximity of social networks is one of the