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### Social Integration Faced with Commuting

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## **SOCIAL INTEGRATION FACED WITH COMMUTING: MORE WIDESPREAD AND LESS DENSE SUPPORT NETWORKS**

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Boltanski and Chiapello (1999) remind us that today, the ability to move is essential not only to peoples' careers, but also to their social integration in general. Mobility has become a central aspect of social integration, notably by contributing to transformation of the modalities of relational embeddedness and the space in which these are implemented. Indeed, the speed potentials afforded by transportation and communication systems allow people to build farther away social ties. In a context where spheres of activity within a single day have both greatly increased in number and grown in distance, mobility potentials may be used as a resource to ward off those spatial and temporal incompatibilities that actors must contend with. In highly advanced societies that have seen an increase in the ways that people can travel through time and space (Urry 2000; Kaufmann 2002), mobility is a value that carries its own differentiations. Its effective use allows a person to acquire social status, whereas neglecting mobility may lead to loss of status. Therefore, this growing importance of spatial mobility contributes to the creation of new forms of inequality. Not having a car (Dupuy 1999), living in a residential area with poor access to public transportation (Cass et al. 2005; Jemelin et al. 2007), and weak temporal or organisational resources to handle projects that require travel (Kaufmann et al. 2005; Le Breton 2005) may jeopardise the social and professional integration of disadvantaged portions of a population.

Contrary to the urban sociology of the 1930s, which saw in the explosion of big cities a risk of anonymisation and social disaffiliation in metropolitan contexts, sociology has since emphasized the plurality of social integration forms (Wellman 1988), opposing the thesis of disaffiliation. In this same idea, some authors (Offner and Pumain 1996; Kesselring 2006a, 2006b; Frei et al., Chapter 5, this volume; Ohnmacht et al. 2008) have suggested that social links are built less in the proximity and the public space, and more in relatedness and distance relationships. The development of commuting in the 1970s, which relaxed the spatial dependence between the workplace and the residence, pertains to this transformation of social anchorings through spatial mobility. The increase of travel time budget and geographical distances is a challenge to the constitution of social ties, whose certain forms are mainly forged in habit and daily time. This chapter addresses these issues on the basis of new Swiss data by examining the spatiality of social integration in a commuting context. From the concept of social capital, it asserts that, if commuting weakens local relationships, it reconstructs more decentralized integration forms, presenting other relational constraints and opportunities. Social inequalities resulting from this new geography of social integration are also discussed based on the concept of *motility*.

### **The Transformations of the Spatiality of Social Integration**

The metropolisation process operating in Switzerland for about 15 years is generic and singular. It is generic because, like most European countries, the largest Swiss agglomerations – Zurich, Geneva, and Basle – concentrate the bulk of job creation, leading to an increase in commuting to these destinations. For example, commuter traffic between the major Swiss cities (Zurich, Basle, Geneva, Bern, and Lausanne) has doubled or tripled every decade (Frick 2004). The metropolisation process is also singular because the metropolisation of

large urban centres manifests itself by new dynamics, directly affecting those centres' hinterlands. Indeed, bi-residentiality and long distance commuting between urban centres and rural areas are quickly developing in Switzerland, benefitting peripheral regions while increasing travel in terms of flow and budgeting time.

Important transformations of the relations with space and, more particularly, of the spatiality of social integration are behind these trends. More than half of the working Swiss population does not work in their municipality of residence. Therefore, the residence neighbourhood is not necessarily the theatre of daily life any more. The change occurred very quickly: About 50 years ago, the Swiss population was mostly non-motorised, so activities and social relations were centred on home neighbourhoods. With the development of commuting and the emergence of long distance commuting and bi-residentiality, social integration is no longer limited to the proximity of a residence.

One result of this is that the classical distinction of daily mobility, related to travel centred on the daily living environment and residential mobility, related to a social uprooting has partly lost its relevance. It is more common to have a daily life that takes place in areas that are dozens of kilometres apart from each other, with habits and routines in each of those areas. A second result is the development of *poly-places*, anchoring forms that are built around attachments to places and/or around social relationships. Confronted with mobility demands, more individuals are forced to develop and maintain social anchorings in different places, sometimes far apart from each other. In this configuration of multiplication and spatial expansion of relational anchorings, individuals should access to various means of transportation (e.g., cars, trains, planes) and various forms of mobility (e.g., physical, virtual, phone) to become socially integrated. According to the chosen strategies and resources that they command, individuals may strive to connect these different relational

anchorings with each other or to maintain them unconnected (Kennedy 2004,, Kesselring 2005), possibly leading to the production of *spatial multi-belonging forms*.

### **Social Capital and Commuting**

A frequent topic of urban sociology research since the findings of Chamboredon and Lemaire (1970), the link between commuting and social relationships is a central dimension of sociology related to social integration forms specific to modernity. Do social relationships change because of commuting? Though this question is well-known, it has not been the subject of systematic investigations in Switzerland. Contrary to the pessimistic hypotheses of the classics, which denounces the decisive weakening of social integration in metropolises, we suggest the hypothesis that commuting affects more the structure than the amount of interpersonal links a person has. In this perspective, we consider the concept of social capital.

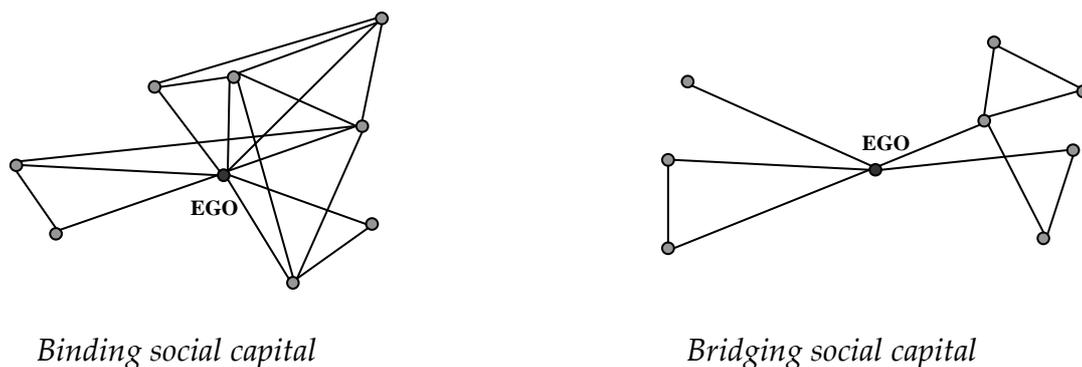
The notion of social capital was used in sociology by Bourdieu (1980), as well as Coleman (1988) and Granovetter (1982, 2000). *Social capital* is classically defined as “the set of current or potential resources stemming from the possession of a lasting network of more or less institutionalized relations” [transl.] (Bourdieu 1980, 2). It is a set of relations specific to each individual, which can be considered as resources through the capability given to this individual to mobilize the people with whom he or she is connected.

The literature on the composition of social capital distinguishes two types of ties, strong ties and weak ties. Granovetter (1982) differentiates strong ties (i.e., durable, multiplex ties involving frequent interactions with a strong emotional implication) from weak ties (i.e., the acquaintances from diverse activity fields, like work or leisure). These two types of ties result in three types of social capital: capital based on strong ties (*binding social capital*), capital based

on weak ties (*bridging social capital*), and capital that combines both types of ties (*binding-bridging social capital*) (Widmer 2006). Binding social capital corresponds to the *closed networks* of Coleman (1988), which are densely connected networks with a low centralization. Most of the individuals, if not all, in closed networks are interlinked by significant ties. Relational constellations tend to be transitive. If an individual called Ego is linked to an Alter X and an Alter Y, it is likely that X is also linked to Y. Conversely, bridging social capital is associated to sparsely connected networks, characterized by a high centralization and weak transitivity, leading some actors to benefit from a position of *compulsory intermediaries* between different network members (Burt, 1992, 2002) (see Figure 1). If the combination of strong and weak ties corresponds to a level of social capital, it is not possible to rank in terms of quantity of social capital the binding and bridging types (Portes 1998; Wilson 1987; Granovetter 1982).

The two types of capital have particular advantages and disadvantages. On the one hand, binding social capital integrates the individual in a dense network of solidarity. On the other hand, it binds the person by strong social control. Bridging social capital provides the individual with more autonomy, but it puts the person in a position of relative weakness according to solidarity practices, which can only be expressed in an individual way because the network members are not linked to each other.

Figure 1: Illustration of binding and bridging social capital



From this point of view, we can make the hypothesis that commuters are more likely to develop bridging social capital than non-commuters. The distance between a place of residence and a workplace gives relational anchorings a particular configuration. Presumably less bound in neighbourhood relationships (Putnam 2000), commuters develop their interpersonal relationships in a broader spatial range, which does not necessarily weaken their networks, but does make them more spatially diverse and less connected. Relational anchoring in several places prevents commuters from putting in touch their significant others. For example, it is more difficult for commuters to benefit from network support if other network members would not or little support them each other. Commuting leads to a spread out and disconnected space relationship, although not necessarily a poorer relationship. The spatial multi-belonging corresponds to bridging social capital in its relational dimension and redefines the relationship of persons to space.

### **Study Data and Indicators**

The 2005 MOSAiCH<sup>1</sup> survey included the Swiss portion of the yearly survey of the International Social Survey Program (ISSP). Data are composed of a representative sample of the population living in Switzerland 18 years old and older. Face-to-face interviews were conducted with 1,078 people on the basis of a standardised questionnaire. Respondents were asked about their social networks based on the following question: *From time to time, most people discuss important matters with other people. Looking back over the last 6 months, who are the people with whom you discussed matters important to you (work, family, politics, etc.)?* Respondents could mention a maximum of 4 persons (*significant others*). At the

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<sup>1</sup> Sociological Measures and Observation of Attitudes in Switzerland. This study was funded by the Swiss National Science Foundation and was conducted by the Swiss Information and Data Archive Service for the Social Sciences (SIDOS).

spatial level, each respondent was asked to identify for each network member (including themselves) the current municipality (*commune*) of residence, the municipality of residence at age 14, and the municipality of their current workplace. On the basis of that information and with the help of *routing* software designing the Swiss road network, road distances were computed. The geographical centres of the municipalities were used as coordinates. Three types of distance were extrapolated:

- The distance between the residences of any two network members.
- The distance between the current residence and the residence at the age of 14 (indicator of earlier residential mobility) of any network member.
- The commuting distance of each active network member (indicator of spatial job-related mobility).<sup>2</sup>

From the first type of distance, we constructed two indicators of spatial expansion:

- The mean distance between the respondent's residence and the one of each person mentioned by the respondent (*distance Ego-Alters*)
- The mean distance between the Alters' residences (*distance Alter-Alter*).

These indicators enabled us to analyse the network spatial expansion according to two components. The first component was related to the relationship between the respondent (*Ego*) and each of the significant others (*Alters*). The second component was only related to the significant others. This last indicator had the advantage of eliminating any definitional dependencies in the analysis of relationships between respondent characteristics and network expansion measures.

The respondents were also asked to identify the person who gives *emotional, moral support* to others in the network.<sup>3</sup> Based on that information, the number of emotional support ties, mutual and not mutual, between the

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<sup>2</sup> Only the Swiss municipalities were nominally stored in the database. When the person had lived, worked, or lived at the age of 14 outside the Swiss territory, the respective distance was then defined as missing values.

<sup>3</sup> The questions were, *Among these persons, who would give you some emotional, moral support at the time of everyday difficulties (for example, when you are a little bit depressed or following a hard day)? And which person or persons, you included, would give some emotional support to [first person mentioned]? Etc.*

respondent and the significant others on the one hand, and between the significant others on the other hand, were computed. In order to construct support indicators that were independent of the network size, we also defined the *activation* of the support ties by the number of existing support ties divided by the number of potential support ties based on the number of persons mentioned by the respondent.<sup>4</sup> Table 1 presents the summary of the used variables for the data.

*Table 1: Summary of the used scale variables*

	Mean	S.D.	Min. value	Max. value	N
Distance Ego-Alters (in km)	19.653	35.361	1.45 <sup>a</sup>	299.49	825
Distance Alter-Alter (in km)	27.431	37.524	0.92 <sup>a</sup>	193.09	531 <sup>b</sup>
Commuting distance of Ego (if active) (in km)	12.910	23.470	1.60 <sup>a</sup>	241	675
Mean commuting distance of the Alters (in km)	13.065	17.569	1.09 <sup>a</sup>	217.66	711
Distance between current residence and one at 14 y.o. of Ego (in km)	34.283	53.303	1.02 <sup>a</sup>	354	882
Activation of the mutual support ties Ego-Alters (in ‰)	718.90	372.24	0	1000	919
Activation of the support ties given by Ego (in ‰)	842.04	311.78	0	1000	919
Activation of the support ties received by Ego (in ‰)	780.83	331.33	0	1000	919
Activation of the support ties between Alters (in ‰)	385.08	357.53	0	1000	620 <sup>b</sup>

<sup>a</sup> The minimum values of distance are not strictly equal to 0 because a value of 2 km was attributed in the situations where the departure and arrival municipality were identical, in order to take into account travel inside the municipality. Some rare inter-municipality distances are lower than 2 km.

<sup>b</sup> The low number of cases is explained by the fact that about 40% of the respondents mentioned less than 2 network members.

## Commuting and Network Spatial Expansion

In order to study the effects of the respondents' commuting on their network spatial expansion, a linear regression analysis was carried out for each of the two indicators. The results of the analysis (Table 3) show that the effect is significant (level: 0.01). The more the respondent commutes, the farther away the persons mentioned in the network live from each other and the farther

<sup>4</sup> This boils down to a calculation of density.

away the respondent lives from them. According to our regression model, for each increase of 10 km in the respondent's commuting distance, the significant others distance themselves from each other by an average of 2.35 km and the respondent distances him- or herself from them an average of 2.24 km.

In order to control the effect of different respondent's characteristics (see Table 2) on this outcome and to refine the analysis, a multiple regression analysis was conducted.

*Table 2: Frequency (in %) of the respondents' socio-demographic variables*

Frequency		Frequency		Frequency	
Sex		Age		Education	
Female	53	18-34 y.o.	22	Basic education	17
Male	47	35-50 y.o.	30	Apprenticeship	41
		51-65 y.o.	27	General education school	8
		66 y.o. and +	21	High (professional) school	24
				University	10
(N)	100 (1077)	(N)	100 (1078)	(N)	100 (1068)
Frequency			Frequency		
Family structure <sup>a</sup>			Context of the residence		
Person living alone			30	Peripheral commune	
Couple living without children			27	Periurban commune	
Couple living with children			29	Suburban commune	
Person without cohabiting partner living with children			4	Small centre	
Other family structures			10	Middle centre	
				Big centre	
(N)		100 (1078)	(N)		100 (1078)

<sup>a</sup> The family structure has been defined on the basis of the cohabitation with the respondent. A couple is then defined by a partner cohabiting with the respondent.

This analysis shows that the respondent's earlier residential mobility has the strongest influence on the physical distance between the respondent and his or

her significant others (Table 3, left column). The next important factor is living alone. This last result stems largely from the fact that the respondents who lived alone did not mention any network members living with them, which caused an increase in the mean distance between them and their significant network members. Also important is the effect of commuting distance. Other variables, such as sex, education, or the context of the respondent's residence do not influence considerably the physical distance between the respondent and the significant network members.

Concerning the physical distance between the significant others (Table 3, right column), it is again the respondent's earlier residential mobility that has the highest impact. Commuting has a slightly more important effect than in the case of the physical distance between a respondent and the significant others. Living alone, having a university degree, and having a residence in an urban centre are also significantly associated, though more moderately, with a higher physical distance between significant network members. On the other hand, the gender of the respondent did not substantially affect the physical distance between the significant others.

Table 3: Regression analysis of network expansion on different variables related to the respondent (Unstandardised regression coefficients)<sup>a</sup>

	Mean distance Ego-Alters		Mean distance Alter-Alter	
<b>Commuting distance</b>	0.224*** (0.154)	0.238*** (0.165)	0.235*** (0.158)	0.273*** (0.192)
<b>Distance between current residence and the residence at 14 years old</b>		0.233*** (0.328)		0.200*** (0.273)
<b>Sex (female)</b>		-1.531 (-0.021)		-1.864 (-0.024)
<b>Age</b>				
18-34 years old		0.631 (0.008)		0.177 (0.002)
35-50 years old		-		-
51-65 years old		6.538* (0.084)		9.324* (0.107)
66 years old and more		0.878 (0.003)		18.850 (0.071)
<b>Education</b>				
Basic education		-		-
Apprenticeship		-7.148 (-0.100)		8.997 (0.117)
General education school		-6.666 (-0.049)		12.055 (0.077)
High (professional) school		-5.692 (-0.072)		11.650 (0.140)
University		-7.385 (-0.062)		20.228** (0.160)
<b>Family structure</b>				
Couple living with children		-		-
Person living alone		20.476*** (0.247)		9.381* (0.105)
Couple living without children		-3.040 (-0.037)		0.382 (0.004)
Person without cohabiting partner living with child(ren)		2.609 (0.015)		0.680 (0.004)
Other family structures		1.323 (0.012)		-1.038 (-0.009)
<b>Context of the residence</b>				
Peripheral municipality		-0.244 (-0.003)		7.752 (0.094)
Periurban municipality		-		-
Suburban municipality		-0.798 (-0.010)		7.473 (0.088)
Small centre		6.975 (0.056)		14.920* (0.114)
Middle centre		-2.469 (-0.022)		17.285** (0.150)
Big centre		-2.351 (-0.018)		19.317** (0.134)
Constant	16.647***	9.900	25.321***	-5.711
R	0.154***	0.477***	0.158***	0.439***
R <sup>2</sup>	0.024***	0.227***	0.025***	0.193***
ΔR <sup>2</sup>		sig. < .01		sig. < .01

\*p < .1    \*\*p < .05    \*\*\*p < .01

<sup>a</sup> Standardised regression coefficients are in brackets

## Commuting and Emotional Support

Because the effects of commuting on the number of the emotional support ties were not found to be significant,<sup>5</sup> we focus on the link between commuting and activation of the support ties.

Table 4 (left column) shows that the activation of the mutual emotional support ties between the respondent and his or her network members is statistically associated with the respondent's commuting. The more the respondent commutes, the lower the proportion of the significant others sharing support with him or her is. The regression model shows that for each increase of 10 km in the respondent's commuting distance, the activation of the mutual support ties between the respondent and the significant network members decreases by 1.4%.

Is this decrease in the proportion of activated significant others a direct consequence of the respondent's commuting or is it due to the fact that, when the respondent commutes, the network members are farther away from the respondent (indirect effect)? By adding different control variables to the regression model, including the mean distance between the respondent and the significant others, we observed that this distance does not influence the exchange of emotional support. It is not the fact that the respondent is far apart from his or her significant network members that causes a decrease in their activation, it is the fact that the respondent is a commuter. In other words, commuters are less likely to share emotional support with their significant others and this relation is not mediated through an effect of distance between the commuter and his or her network members. We also observed that young adults, women, and people with a high school degree support each other proportionally more with their significant others. Conversely, people living alone, in big urban centres, and, to a lower extent, those living in small centres

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<sup>5</sup> This result can be explained by a curvilinear effect observed in the relation between the network size and the respondent's commuting, which is not visible in a linear regression analysis.

declare that they support each other proportionally less with their significant network members. This last outcome shows that the morphology of the residence context has an impact on mutual support.

The study of the received and given support (Table 4, right columns) enabled us to refine the analysis. Concerning the activation of the given support relations, women and young adults give support to a larger proportion of their network members. Conversely, people living alone, in *other* family structures (living with parents, flatmates, etc.), and in big centres support their significant others proportionally less. Neither commuting distance nor education influences the support given by respondents. On the other hand, people with high levels of education reported receiving emotional support from a higher proportion of significant others than respondents with low levels of education. Conversely, elderly people, commuters, and people living in small centres receive support from a smaller proportion of their significant network members.

These results indicate that the respondent's commuting distance do not considerably influence the proportion of significant others to whom he or she gives emotional support. Commuting distance negatively influences the proportion of significant others who give him or her support. This deficit can be interpreted as an effect of the commuter's mobile living arrangement, since increasing time spent travelling may foster a weaker involvement in the activities with significant others (relatives, close friends).

Table 4: Regression analysis of the activation of the emotional support ties (in %) Ego-Alters on different variables related to the respondent (Unstandardised regression coefficients)<sup>a</sup>

	Activation of mutual support ties Ego- Alters		Activation of support ties given by Ego		Activation of support ties received by Ego	
<b>Commuting distance</b>	-1.335** (-0.085)	-1.434** (-0.091)	-0.634 (-0.048)	-0.868 (-0.065)	-1.264** (-0.090)	-1.403** (-0.100)
<b>Distance Ego-Alters</b>		-0.019 (-0.002)		-0.054 (-0.006)		0.186 (0.019)
<b>Sex (female)</b>		64.686** (0.088)		70.017** (0.112)		43.153 (0.065)
<b>Age</b>						
18-34 years old		85.841** (0.105)		75.641** (0.109)		54.022 (0.074)
35-50 years old		-		-		-
51-65 years old		41.916 (0.051)		-6.888 (-0.010)		44.256 (0.060)
66 years old and +		-103.837 (-0.040)		22.650 (0.010)		-194.480* (-0.084)
<b>Education</b>						
Basic education		-		-		-
Apprenticeship		77.495 (0.104)		52.298 (0.083)		59.575 (0.089)
General education school		-67.776 (-0.046)		-33.168 (-0.027)		-61.065 (-0.046)
High (professional) school		129.059** (0.157)		63.755 (0.092)		91.882* (0.125)
University		105.590 (0.090)		12.346 (0.012)		122.547** (0.116)
<b>Family structure</b>						
Couple living with child.		-		-		-
Person living alone		-87.563** (-0.101)		-88.426** (-0.120)		-47.337 (-0.061)
Couple living without children		-43.502 (-0.050)		-3.954 (-0.005)		-24.846 (-0.061)
Person without cohabiting partner living with child.		0.702 (0.000)		8.844 (0.006)		-18.306 (-0.012)
Other family structures		-91.582 (-0.079)		-131.834*** (-0.134)		-8.556 (-0.008)
<b>Context of the residence</b>						
Peripheral municipality		-36.901 (-0.044)		57.144 (0.080)		-16.062 (-0.021)
Periurban municipality		-		-		-
Suburban municipality		-16.651 (-0.020)		33.164 (0.048)		14.673 (0.020)
Small centre		-119.892* (-0.096)		-16.067 (-0.015)		-147.247*** (-0.131)
Middle centre		16.153 (0.014)		49.436 (0.050)		12.402 (0.012)
Big centre		-135.852**(-0.105)		-107.285* (-0.098)		-85.568 (-0.073)
Constant	744.6***	681.985***	853.8***	783.107***	802.9***	735.396***
R	0.085**	0.258***	0.048	0.280***	0.090**	0.257**
R <sup>2</sup>	0.007**	0.067***	0.002	0.079***	0.008**	0.066**
ΔR <sup>2</sup>		sig < .05		sig. < .01		sig. < .05

\*p < .1    \*\*p < .05    \*\*\*p < .01

<sup>a</sup> Standardised regression coefficients are in brackets.

The analysis of the activation of support ties between significant others (Table 5) shows that neither the respondent's commuting distance nor the significant others' mean commuting distance exert a significant influence. On the other hand, the physical distance between the significant others' residences negatively influences the activation of the support ties. This result stems logically from the fact that significant others who were far apart from each other had a greater chance to know each other less or not at all and, therefore, support each other proportionally less. This analysis also indicates that the networks of male respondents, between 51 and 65 years old, present a stronger proportion of significant others supporting each other. The respondents' education level and the context of residence, however, do not have any effect on the emotional support exchanged between significant others.

Table 5: Regression analyses of the activation of the emotional support ties (in ‰) Alter-Alter on different variables related to the respondent (Unstandardised regression coefficients)<sup>a</sup>

	Activation of support ties Alter-Alter	
<b>Commuting distance</b>	-1.110 (-0.082)	-0.662 (-0.049)
<b>Mean commuting distance of the Alters</b>		0.585 (0.029)
<b>Distance Alter-Alter</b>		-1.089** (-0.117)
<b>Sex (female)</b>		-97.600** (-0.137)
<b>Age</b>		
18-34 years old		-7.294 (-0.010)
35-50 years old		-
51-65 years old		110.008** (0.133)
66 years old and more		-50.472 (-0.020)
<b>Education</b>		
Basic education		-
Apprenticeship		5.410 (0.008)
General education school		-17.713 (-0.012)
High (professional) school		21.611 (0.028)
University		58.243 (0.050)
<b>Family structure</b>		
Couple living with children		-
Person living alone		22.658 (0.027)
Couple living without children		-49.716 (-0.060)
Person without cohabiting partner living with children		27.906 (0.017)
Other family structures		-54.949 (-0.049)
<b>Context of the residence</b>		
Peripheral municipality		-49.254 (-0.063)
Periurban municipality		-
Suburban municipality		-75.328 (-0.096)
Small centre		-9.481 (-0.008)
Middle centre		-28.092 (-0.025)
Big centre		83.173 (0.064)
Constant	401.681***	475.135***
R	0.082	0.269
R <sup>2</sup>	0.007	0.072
ΔR <sup>2</sup>		n.s.

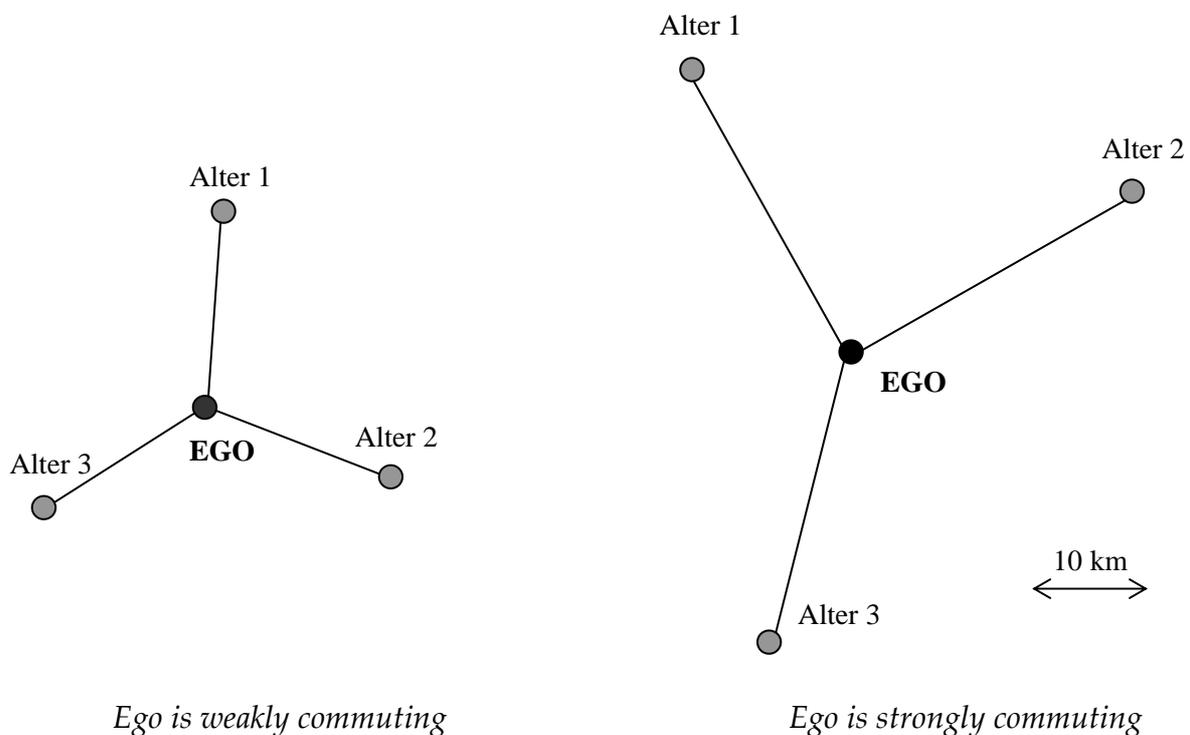
\*p < .1    \*\*p < .05    \*\*\*p < .01

<sup>a</sup> Standardised regression coefficients are in brackets.

## Commuting and Social Integration: More widespread Relations and Less Activated Support Ties

Based on our results, our initial hypothesis is confirmed: *commuters are more likely to develop a social network that is less anchored in contiguity, more spatially expanded, and more discontinuous than non-commuters*. The longer a respondent's commuting distance is, the larger the distance between the respondent's place of residence and those of his or her significant others is. Further, the longer the commuting distance, the higher the mean distance between the residences of the significant others (see Figure 2). Therefore, commuting is a factor of transformation of social integration, of its local embedding, and of its recomposition on a larger scale. The commuter becomes the centre of a spatially widened network whose members are more distant from each other than traditional social networks.

Figure 2 : Illustration (to scale) of the network spatial expansion according to a weak (2 km) or strong (50 km) commuting distance of the respondent



Distances were drawn to scale, based on the predictions of the simple regression model.

Thus, commuting practices must not be strictly understood as a way to maintain a locally embedded and densely connected social network, but also as a mobile living arrangement fostering a spatially expanded social anchoring.

These spatial recompositions of social integration have a series of relational consequences. Previous research has shown that the frequency of interactions is very sensitive to geographical distance, which hinders contacts and exchanges (see for instance: Coenen-Huther et al. 1994; Bonvalet and andMaison 1999; Axhausen and andFrei 2007). Therefore, some important ties tend to become virtual, or at least, to become more potential than active.<sup>6</sup> It is what we observed if we consider the activation of the mutual emotional support ties between an individual and his or her significant others that weakened when the individual's commuting distance increased. Thus, spatial distance has relational repercussions because it integrates commuters in interpersonal relationship networks in which the proportion of non-activated significant persons is higher. In particular, this is the proportion of network members supporting the commuter that decreases when the distance from home to work increases, whereas the proportion of network members receiving some support from the commuter remains stable. In accordance with our hypothesis, we did not measure any significant differences in the number of support ties according to commuting. The commuter, in particular the long distance commuter, tends to quote more significant network members, even if they are proportionally less activated in their support with him or her. Commuting is indeed associated with a structural recomposition and not a weakening of interpersonal relationships. Relational anchorings associated with commuting are as important, if not more important, than others, but potentially less supportive.

It is, therefore, vital to investigate the extent to which emotional relations develop differently within a more spatially expanded and more discontinuous

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<sup>6</sup> Because the frequency of interactions between network members was not collected in the MOSAiCH survey, this proposition remains on the order of a hypothesis.

network. Some forms of emotional support, those forged in habit and daily time, can be more difficult to share with commuters, given that they are relationally anchored in different places. Time spent travelling may also be a hindrance to more involvement in social life. These elements could partially explain why commuters claim to receive less support than they provide. On the other hand, commuting may foster the constitution of close relations, with colleagues for instance, who are disconnected from the rest of the solidarity network because of physical distance between home and workplace. Other forms of support within the primary network (e.g., confidence relationships, professional relationships) could then develop. At last, we can also assume that commuters may try to develop, through the physical distance from their social relations, different solidarity dynamics, based for instance on a lower level of responsibility towards them (e.g., children, relatives).

By the mediating effect of the physical distance, commuting is moreover associated with a higher proportion of significant others not supporting each other. The significant others support each other less, probably because they do not know each other well and have fewer opportunities to be together. Owing to a more widespread social anchoring, the commuter cannot fully exert this logic of transitivity, which is at the core of the social networks construction (Widmer 1999). This results in a situation of *bridging social capital*, in which the commuter becomes the compulsory intermediary between the members of his or her network (Burt 1992, 2002). If the respondents themselves present less activated support ties with their significant others in situations of commuting, this suggests the presence of weaker ties, confirming again the constitution of a bridging social capital. This has important potential consequences. Taking advantage of greater autonomy because their significant others are sparsely connected to each other, commuters can benefit from intersecting social circles (Simmel 1999). Through this relatively new social integration that is particular to modernity, they can develop an original identity, a sort of synthesis of

various influences, which are physically distant and relatively disconnected from them. Because of a position of intermediary between disconnected individuals, commuters take advantage of various and non-redundant materials and resources and can play the role of mediator, controlling exchanges between their significant others (Burt 1992). Additionally, they are not constrained by closed networks (Coleman 1988) characterized by a strong normative pressure (i.e., everybody knows everybody in the network and all members react collectively to rumoured or real deviances). However, on the other hand, commuters do not benefit from the collective activation of a set of interconnected persons, where trust and mutual aid are reinforced by the collective constraint.

The results discussed above highlight the net effect of commuting from the effects of other variables, such as education, sex, age, family structure, residential mobility, and residence context. In other words, if commuting exerts a negative effect on the activation of the support ties, it is not because commuters are mainly men, well-educated, or inhabitants of urban centres. Other variables create their own important effects. First, the distance between the residence at the age of 14 and the current residence produce very similar effects to commuting on the network spatiality. If this implicitly suggests that social ties are progressively built since early childhood, it also shows that migrations, inside or outside<sup>7</sup> the country, have opened the traditional modes of social integration and recomposed them in a broader space. This influence of the residential trajectories was notably brought to light by the studies on the spatiality of family configurations (Bonvalet et Maison 1999; Bonvalet et Lelièvre 2005). Because the two mobility dimensions, residential and professional, are going to increase and reinforce each other, we see what their joint effect on interpersonal relationships could be. The two mobility

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<sup>7</sup> External migration was not measured in this study.

dimensions could result in networks that, without being smaller, will be less and less dense and more widespread, showing a *bridging* logic.

Among other important results, residence context is significant. Our analyses show in this respect that commuting influences social relationships differently according to the context of a respondent's residence. For equivalent commuting, the inhabitants of urban centres have social networks, which are, at the same time, more widespread and characterized by a lower activation of mutual support ties with their significant others than people living in suburban, periurban, or peripheral municipalities. The urban morphology, i.e., the *visible* dimension of the city continues to be a social marker. Contrary to a now dominant discourse on the urban question, the city has not been totally dissolved in even broader conurbations with even blurrier borders. This result particularly shows that the relational anchorings of city centre inhabitants differ from those of people living in the city outskirts. This observation is not reduced to the different composition of the population, in terms of education or family structure. This social integration, characterized by less dense and more widespread social networks, can also be explained by the stronger presence of foreigners in urban centre contexts.<sup>8</sup>

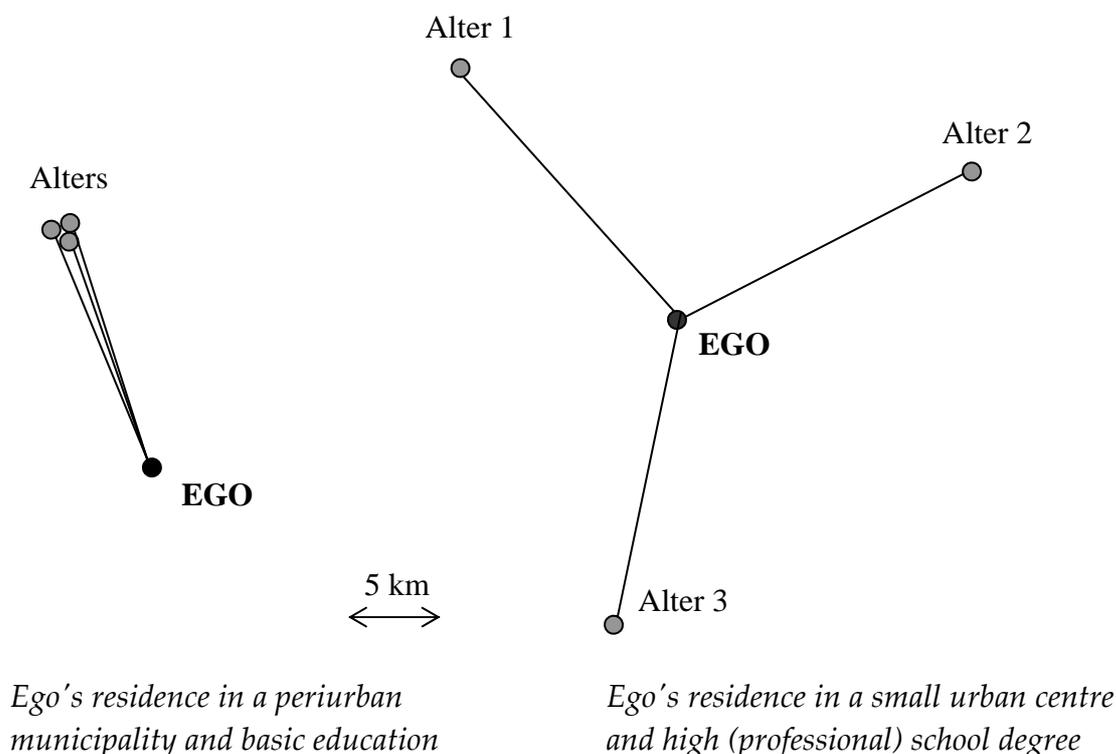
Added to this, the educational level and the residence context present a very interesting effect on network spatiality. These factors only influence the distance between the significant others, whereas the distance between the respondent and the network members hardly varies. Highly educated people living in urban centres benefit from a network where they are more centrally located according to the spatial position of their significant others. Conversely, less educated people living outside the urban centres are less centred.

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<sup>8</sup> The proportion of respondents who lived abroad at the age of 14 and live currently in a urban centre reaches 23% against 16% for those living currently in a suburban, periurban or peripheral municipalities. Given that their municipality of residence at the age of 14 is outside the Swiss territory, the distance of earlier residential mobility cannot have been measured and was then defined as missing values. These individuals have thus not been identified as having a strong residential mobility.

Additionally, this result supports the thesis that less educated people living in the outskirts are more likely to find themselves farther from their significant network members than they are from each other (see Figure 3).

Figure 3: Illustration (to scale) of the network spatial expansion according to the education level and the residential context of the respondent



Distances were drawn to scale, based on the predictions of the multiple regression model. The other variables were fixed identically in both situations (commuting distance: 10 km; distance between the current residence and the one at the age of 14: 20 km; male; 35-50 years old; family structure: couple living with children).

The more reticular living spaces that were highlighted in this chapter imply that the potential to be mobile, i.e., *motility*, becomes an essential element from which social networks are built and maintained. In a general way, motility may be defined as the manner in which an individual appropriates the field of possibilities relative to movement, and uses them (Kaufmann, 2002; Kaufmann et al., 2004). In our study, it may be more precisely understood as a potential or real capability to maintain significant support ties in spite of physical distance;

to keep in touch by means of possibilities offered by the transportation and communication systems; and the ability to build new significant relationships in various places. A strong mobility capital allows individuals to maintain or widen their social capital. The existing literature on the domain shows that these capabilities are not egalitarian over the social structure. For the most disadvantaged population categories,<sup>9</sup> several factors may intensify their difficulties to maintain significant social relations in daily life. Having no car (Dupuy 1999; SEU 2002 report cited in Urry 2007, p. 13; Gray et al. 2006); living in a residence apart from transportation facilities and meeting places (shops, bars) (Church et al. 2000; Cass et al. 2005; Kenyon 2006); or weak resources, in organizational or temporal terms, to travel in order to see friends and relatives (Kaufmann et al. 2005; Le Breton 2005; Urry 2007) may explain such difficulties.

Such social inequalities regarding motility can explain differences in the proportion of supporting significant others according to education and commuting. Though highly educated people and commuters present a broader relational space, the former are more likely to have a higher proportion of significant others supporting them than less educated people. Conversely, commuters are more likely to have a lower proportion of supporters compared with non-commuters. Highly educated people have a stronger ability to create and maintain support ties with significant people who are not physically close than less educated people do. The spatial fragmentation between home and workplace, as well as time spent in transportation, could explain the reversed result by commuters. In more general terms, the broader spatiality of social anchorings has consequences on the way to tackle the issue of socio-spatial inequalities. It is notably hazardous to measure social segregation in an agglomeration from the only residential location. Because the residence municipality is not necessarily the centre of social life any more, a segregation

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<sup>9</sup> In particular, isolated women with children, migrants, less educated, and disabled people.

measure must take into account the social anchorings realised in a more broadly space.

This chapter refers to some of the dimensions associated with the new spatiality of social integration. Several issues remain open at this stage and further explorations should clarify them. Questions arise about the impact of the network composition on its spatiality. If, for example, people living alone have networks which are more spatially fragmented and relationally less dense, it may be because they have no cohabiting partner. Conversely, perhaps some people have more locally anchored networks because they live with children who are old enough to be mentioned within their network. As suggested by the typology developed by Wellman et al. (1988), commuters might correspond to these modern individuals, having a physically widespread *liberated community* of friends and colleagues, whereas relatives might remain embedded in a more local community. It would also be worth exploring the influence of family recompositions or municipalities' accessibility on the spatial expansion of social relationships. Finally, by focusing on support ties, we weighted the emotional dimension of social ties, favouring strong ties compared with weak ties. By concentrating on a relationship form more characteristic of weak ties (relationship as information channel, influence relationships, more superficial discussions), bridging social capital might be shaped more markedly in situation of commuting.

The links between geographic mobility and social capital highlighted in this chapter should not be understood merely as an univocal effect of the first factor on the second one. Dynamics between spatial dimension and relational dimension are certainly more interactive; both dimensions may reinforce each other over the life course. If high mobility fosters a more widespread social network, this latter may lead to new forms of spatial mobility, given the less localised relational anchoring. A process of cumulative effects (Dannefer 1988)

may then occur: small differences in the social network and the mobility experiences of one individual, when they combine, can produce very different life trajectories. Therefore, relocating in the first part of life may lead to a spatially and relationally more discontinuous social network, which in turn may foster a stronger willingness for new experiences of spatial mobility.

These analysis dimensions must still be scrupulously studied, but our overall finding is nevertheless solid. By favouring spatial mobility, modernity creates new means to be relationally anchored. The example of commuting that we developed in this chapter shows in particular that integration modes become relationally less dense and that space, within which social networks are established, can be, at the same time, very distant from the residence and fragmented.

### References

- Axhausen, K. W. and Frei, A. (2007), Contacts in a shrunken world. *Arbeitsbericht Verkehrs- und Raumplanung*, 440, IVT, ETH Zürich. Zürich.
- Boltanski, L. and Chiapello, E. (1999), *Le nouvel esprit de capitalisme* (Paris: NRF, Gallimard).
- Bonvalet, C. and Maison, D. (1999), Familles et entourage: le jeu des proximités, in Bonvalet C. Gotman, A. and Grafmeyer, Y. (eds), *La famille et ses proches, l'aménagement des territoires* (Paris: PUF).
- Bonvalet, C. Lelièvre, E. (2005), Les lieux de la famille. *Espaces et sociétés*. 1-2, 99-122.
- Bourdieu, P. (1980), Le capital social: notes provisoires. *Actes de la Recherche en Sciences Sociales* 31, 2-3.
- Burt, R. (1992), *Structural holes: The social structure of competition* (Cambridge, MA: Harvard University Press).
- Burt, R. (2002), The Social Capital of Structural Holes, in : Guillén, M.F., Collins, R., England, P., and Meyer, M. (eds).
- Cass, N., Shove, E. and Urry, J. (2005), Social Exclusion, Mobility and Access, *Sociological Review* 53:3, 539–55.

- Chamboredon, J.-C. and Lemaire, M. (1970). Proximité spatiale et distance sociale. Les grands ensembles et leur peuplement. *Revue française de sociologie*, 11, 3-33.
- Church, A., Frost, M. and Sullivan, K. (2000), Transport and Social Exclusion in London, *Transport Policy* 7:3, 195–205.
- Coenen-Huther, J., Kellerhals, J. and von Allmen, M. (1994), *Les réseaux de solidarité dans la famille* (Lausanne: Réalités sociales).
- Coleman, J. (1988), Social capital and the creation of human capital, *American Journal of Sociology* 94, 95-121.
- Dannefer, D. (1988), Differential aging and the stratified life course: conceptual and methodological issues, in Maddox and Lawton (eds.).
- Dupuy, G. (1999), *La dépendance automobile* (Paris: Anthropos-Economica, collection Ville).
- Frei, A. and Axhausen, K.W. (2007), Size and structure of social network geographies. *Arbeitsberichte Verkehrs- und Raumplanung*, 439, IVT, ETH Zürich.
- Frick, R. (2004), Recensement fédéral de la population. La pendularité en Suisse. Office fédéral de la statistique, Neuchâtel.
- Granovetter, M. S. (1982), The strength of weak ties. A network theory revisited, in Marsden and Lin (eds.).
- Granovetter, M. S. (2000), *Le marché autrement: les réseaux dans l'économie* (Paris: Desclée de Brouwer).
- Gray, D., Shaw, J. and Farrington, J. (2006), Community Transport, Social Capital and Social Exclusion in Rural Areas, *Area* 38:1, 89–98.
- Guillén, M.F., Collins, R., England, P. and Meyer, M. (eds), *The New Economic Sociology: Developments in an Emerging Field* (New York: Russel Sage Foundation).
- Hollstein, B and Straus, F. (2006), *Qualitative Netzwerkanalysen. Konzepte, Methoden, Anwendungen* (Opladen: VS Verlag).
- Jemelin, C. Kaufmann, V. Barbey, J. Pflieger G. (2007). Inégalités sociales d'accès : quels impacts des politiques locales de transport ? *EspacesTemps.net*, 2007.
- Kaufmann, V. (2002), *Re-thinking mobility* (Aldershot, Burlington: Ashgate).

- Kaufmann, V., Bergman, M.M. and Joye, D. (2004), Motility: Mobility as Capital, *International Journal of Urban and Regional Research* 28:4, 745–65.
- Kaufmann, V., Montulet, B. and Le Breton, E. (2005), Mobilité et mobilités familiales, *Netcom – Networks and Communication Studies* 19:3, 137–39.
- Kennedy, P. (2004), Making global society: Friendship in Networks among transnational professionals in the building design industry, *Global Networks*, 4: 2, 157-179.
- Kenyon, S. and al. (2006), Reshaping patterns of mobility and exclusion? The impact of virtual mobility upon accessibility, mobility and social exclusion, in: Sheller and Urry (eds.).
- Kesselring S. (2005), New mobilities management. Mobility pioneers between first and second modernity, *Zeitschrift für Familienforschung*, 2, 129-143.
- Kesselring, S. (2006a), Topographien mobiler Möglichkeitsräume. Zur sozio-materiellen Netzwerkanalyse von Mobilitätspionieren, in Hollstein and Straus (eds.).
- Kesselring, S. (2006b), *Scatting over thin ice. Pioneers of the mobile risk society*. Conference presentation "Reprendre Formes. Formes urbaines, pouvoirs et expériences. Séminaire international de réflexion en présence de Manuel Castells", Lausanne, Suisse, 26.-28. juin 2006.
- Le Breton, E. (2005), *Bouger pour s'en sortir. Mobilité quotidienne et intégration sociale* (Paris: Armand Colin).
- Maddox, G. and Lawton, P. M. (eds.) (1988), *Annual review of gerontology*, 8, 3-36. (New York: Springer).
- Marsden P. V. and Lin, N (1982), *Social Structure and Network Analysis* (London: Sage Pub) .
- Offner, J.-M. and Pumain, D. (dir.) (1996), *Réseaux et territoires. Significations croisées* (Paris: éditions de l'Aube).
- Ohnmacht, T., Frei, A. and Axhausen, K.W. (2008), Mobilitätsbiografie und Netzwerkgeografie: Wessen soziales Netzwerk ist räumlich dispers?, *Swiss Journal for Sociology* 31:1, 131–164.
- Portes, A. (1998), Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology* 24, 1-24.
- Putnam, R. (2000), *Bowling alone* (New York: Simon and Schuster).

- Scheller, M. and Urry, J. (eds.) (2006), *Mobile technologies of the city*, (London: Routledge).
- Simmel, G. (1999), *Sociologie, Étude sur les formes de la socialisation* (Paris: PUF) (Chapter : Le croisement des cercles sociaux - 1908, 407-452).
- Urry, J. (2000), *Sociology beyond societies. Mobilities for the 21st Century* (London: Routledge).
- Urry, J. (2007), Des inégalités sociales au capital en réseau, *Swiss Journal of Sociology*, 33: 1, 9-26.
- Wellman, B., Carrington, P. and Hall, A. (1988), *Networks as Personal Communities in Social Structures: A Network Approach* (New York: Cambridge University Press).
- Widmer E. D. (1999), Family contexts as cognitive networks : A structural approach of family relationships. *Personal Relationships*. Special Issue on Methodological and Data Analytic Advances in the Study of Interpersonal Relationships, 6, 487-503.
- Widmer, E. D. (2006), Who are my family members? Bridging and binding social capital in family configurations. *Journal of Personal and Social Relationships* 23:6, 979-998.
- Wilson, W. J. (1987), *The truly disadvantaged* (Chicago: University of Chicago Press).
- Wittel, A. (2001), Toward a Network Sociality, *Theory, Culture & Society* 18:6, 51-76.