



WORKING PAPERS SERIES
DIPARTIMENTO DI
SCIENZE SOCIALI ED ECONOMICHE
n. 2/2016

Gender Gaps in Social Capital:
A theoretical interpretation of the Italian
evidence

Author/s:

Elisabetta Addis and Majlinda Joxhe

Gender Gaps in Social Capital: a theoretical interpretation of the Italian evidence¹

ABSTRACT

In this paper, we show that social capital accumulation along the life cycle is different for men and women. We discuss the concept of social capital and some problems connected to its definition and measurement. We survey the literature on gender and social capital and use the Italian data of the “Multiscopo” Survey to assess differences in life cycle accumulation of social capital by sex and age. The lifecycle profile of social capital accumulation is gendered, with men accumulating more social capital at all ages, with a different peak and overall profile. We also show that, over 15 years, the gap in social capital by sex narrowed. Finally, we introduce a model of social capital structure compatible with the empirical evidence and with notions of gender as defined in feminist literature.

Keywords: Social Capital, Gender, Network formation, Relations, Life cycle, Italy.

JEL Codes: Z130, J160, D85

1. Literature framework on social capital

Following the seminal work of two sociologists (Pierre Bourdieu, 1983; James S. Coleman, 1988) and a political scientist (Robert D. Putnam with Robert Leonardi and Raffaella Y. Nanetti: 1993), the concept of “social capital” entered the economic literature, with a large stream of studies applying it to many economics subfields, such as development, job search, well-being and behavioral finance. Related development can also be found in Social Psychology (Herminia Ibarra, 1997) and in Managerial Sciences (Howard Aldrich, Pat Reese and Paola Dubini, 1989, Ronald Burt 2000), where scholars use “network analysis” to study the same phenomenon with a slightly different perspective than in Economics.

Even focusing only on the Economics literature, we find that definitions of "social capital" are abundant, somewhat dissimilar for different authors, and sometimes quite fuzzy. Some confusion remains as to what exactly constitutes social capital, and what is its relation to human capital. Nonetheless, two elements stand out in almost all definitions:

- a) The existence of **networks** of relationships other than market exchange (a.k.a. structural social capital) and
- b) The existence of **norms** shared by people in the network, which create the conditions for reciprocal trust (a.k.a. cultural social capital).

¹The research for this paper was financed by Sardinian Regional Authority within the project “Capitale sociale e divari economici regionali”, (Social capital and regional disparities), year 2012. We wish to thank professors Francesco Pigliaru and Angelo Antoci coordinators. We are also thankful to Robert Waldmann and all the participants of 24th IAFFE conference in Berlin.

For instance, the World Bank (World Bank: 2013) defines social capital as “*norms and networks that enable collective action. It encompasses institutions, relationships, and customs that shape the quality and quantity of a society's social interactions*”².”

Early '60s economic studies considered the impact of institutions on the process of economic growth and the role of good institutions on reducing transactions costs and power property rights. The institutional approach has focused more on the formal social interactions. In contrast, the introduction of social capital goes somewhat beyond the formal type of social interactions, introducing social capital at the individual level, defining it also as a resource for the single individual to draw upon. Nonetheless, we can still detect a kinship between the social capital approach and the institutionalism approaches to Economics, as opposed to mainstream market-focused approaches.

Samuel Bowles and Herbert Gintis (2002, pg.419) stress that

Social capital generally refers to trust, concern for ones associates, a willingness to live by the norms of one's community and to punish those who do not. While essential to good governance, these behaviors and dispositions appear to conflict with the fundamental behavioral assumptions of economics.

The picture of how the economy works according to social capital theory is very different from the picture of neoclassical mainstream economics. In mainstream Economics, the only and the most important relation is the “exchange” relation between agents in the market. Other relationships, as in the Beckerian theory of the family, may be modeled by imitating the market exchange. In the social capital narrative, instead, each individual is depicted as belonging to one or more networks of relations since birth. As he or she grows old, he/she moves along the networks of relationships acquiring new attributes and new positions. By pursuing an education, the individual is not only accumulating skills that constitute human capital but also finding friends, colleagues, and mentors who constitute his social capital. By accepting a job, she is not only acquiring work experience but also entering in relations with co-workers, suppliers, clients, bosses, and banks. Even the process of family formation extends one's social capital, as does one's children's schooling and acquiring a home near new neighbors. In addition to extended family, school and work, a person may enter in relations with the people he/she meets in voluntary associations for other purposes of many different kinds, such as book clubs, political parties, religious or sport-related affiliations.

Bowles and Gintis note the great difference existing between the rational agents of mainstream *microeconomic* theory acting in the market and the agents involved in networking. Social capital theory has insightful implications for *macroeconomics* as well. Standard macroeconomic policies, typically fiscal and monetary policies, will have unpredictable effects depending on whether the existence of social capital allows aggregate demand and aggregate supply to behave the way macroeconomic theory predicts. Differences in social capital by place or by time imply different effects of macro policies. This is exactly why the inadequacy of social capital has

been investigated as the source of the failures to develop the Italian South (Luciano Mauro and Francesco Pigliaru: 2011).

The main reason why networks seem to help the economy is because they are correlated with the presence of useful social norms. As information flows through the networks, it provides value to the individual, who may have access to more opportunities. In addition, people end up behaving according to the same set of norms and values. This creates an environment of trust, with many beneficial effects: it reduces the cost of enforcement of contracts, decreases free riding, and makes good governance possible. The exact content of the norms of course makes a difference: if the norm says "work hard and be truthful", as in the Protestant ethic, it helps the economy more than if the norm says "obey the Mafia dons". However, the existence of shared norms and trust generates conditions for the possibility of collective action and the creation of public goods.

Therefore, the literature identifies a structural dimension of social capital – people's actions- and a cognitive dimension of social capital – people's perceptions and values (Ronald S. Burt: 2000; Nan Lin: 2002). Structural aspects are easier to investigate because they materialize in rules and specific behavior – creating a network for volunteer work, for example. Cognitive aspects such as trust, shared values, empathy, and respect often require ad-hoc surveys. It also recognizes that the links in the network may have different strengths. The strong ties are important (James Coleman, 1988), but weaker ties may have important economic consequences (Mark Granovetter, 1973, 1982). The network itself has a shape: it may be an open network, a network with closure, or a network containing structural holes (Ronald Burt 1992). Another strand of the literature identifies three forms of networking or kinds of links (Fabio Sabatini, 2004, 2009):

- a) Close links within the family (*bonding social capital*)
- b) Strong and weak links with friends, acquaintances and coworkers (*bridging social capital*)
- c) Association and volunteer work in the civil society (*linking social capital*)

Each of these forms of social capital of course has both structural and cognitive aspects.

We may define a societal level of social capital as the framework of the society that shows either a thick or thin layer of connections and voluntary associations. The market works well only if it is embedded in this thicket of other networks. The same is true regarding the institutions in charge of economic governance. Besides the societal dimension, social capital has an important individual dimension. In the perspective shared by managerial science, social capital may be considered as an endowment of the single individual, similar but separated from human capital, having its own returns and affecting individual economic outcomes (Claudia Goldin and Larry Katz: 2001). Social capital, therefore, has a distribution among people and across places or times; it may grow or deteriorate.

Sabatini (2009) underlines how issues of definition are closely connected with issues of measurement of social capital. Empirical investigation is important because it generates the possibility for testing the theoretical predictions related to the concept of social capital. The lack of adequate methodological approaches in measurement may be produced by the lack of good data, which reflects the multidimensional framework in which social capital may exert its positive or negative effect.

2. Gender and social capital

Women have been an important presence in social networks since the beginning of this literature. For Putnam and colleagues, women's voluntary and unpaid participation in associations, religious groups and clubs is an essential ingredient of proper civic life. This participation is used in many quantitative analysis as a proxy to measure social capital.

Women's presence in the social capital narrative did not produce an explicit consideration of gender differences and asymmetries when describing, formally and even graphically, the structure of networks. Networks theorized in the literature remain genderless. Gender is a cultural construct that prescribes different behavior, attitudes and (yes!) norms, for the people of the two biological sexes.

Research on gender documented the existence and persistence of an asymmetry, where the male sex is perceived or believed to be of higher value than the female sex. As a consequence, the male sex assumes a dominant position, in terms of power and access to material and symbolic resources. The female sex is perceived to be of lesser value, and expected, other things being equal, to defer to the other sex in decision making in most areas of expertise. The other things of course are seldom equal: age, social class, education, position at work, and position in the market exchange create a myriad of combinations, capable of putting a given woman in a position of authority over a given man. A female professor decides the grades of male and female students, and a female policewoman may fine a male traffic-offender. Women can be empowered enough, in contemporary western societies, due to their overall position in the social structure, that some of them achieve top positions, albeit still in relatively low number because of the drag that gender still puts on their ability to rise.

Gender scholars maintain that introducing gender in social science studies is a two-step procedure. The first step is explicitly including women into consideration in data collection and in the analysis. This is a prerequisite to the second step, i.e., studying gender relations, including structures of dominance, and their change. In the literature on social capital, women are sometimes included, but a proper gender analysis has not yet been developed. The "gender and social capital" literature limits itself to descriptions and may suffer from under-theorizing.

An important result of the research on gender in the field of social psychology is that the perception of female inferiority may be the result of a cognitive bias. This bias may be present even in the absence of any ideological prejudice in favor of men. Such cognitive bias affects evaluations of men's and women's performance made both by men and by women. When effective performances are measured, the existence of bias is revealed (Claudia Goldin and Cecilia Rouse, 2000, Martha Foschi, Larissa Lai, Kirsten Sigerson, 1994, Martha Foschi2004). Women are not inferior, but they are perceived as inferior. When performance is properly measured, women perform better than how they were expected to perform. Because of this misperception, active within the selection mechanisms by which society structures itself, women end up, on average and other things equal, in a relatively inferior position with respect to men, in terms of power and access to resources.

This cognitive bias against women has an important corollary for social capital theory. It appears that women are not trusted as much as men are, both by men and

by other women. They are not trusted to be able to perform the way that they are able to perform, at least in the public sphere. In the private sphere, they are trusted with what, in biological terms, is the most important of tasks, deciding the best care for offspring. This trust does not carry over to leadership, responsibilities and decision making in the community at large. If creating trust is the essence of what social capital is doing for the economy, the inability to trust women as, for example, recipient of credit, keeper of engagements and so on may have dire consequences. Even in the presence of strong networks, production of trust may lag. Vice versa, societies that learn to trust women may register an increase in the overall level of trust which benefits the entire economy.

Nan Lin (2000) presents a comprehensive survey of the sociological literature on gender and social capital in the last decade of the twentieth century. He reports the findings by Gwen Moore (1990) that showed that men's networks include fewer kin and more non-kin; they include fewer neighbors and more co-workers, advisors and friends. Women's networks, in contrast, incorporate a larger proportion of kin, as well as more different types of kin and fewer types of non-kin. Many of these differences are reduced when controlling for employment status, family composition and age, yet the larger number, higher proportion and greater diversity of kin relationships cultivated by women is still significant.

Women have more kin relationships, notwithstanding the fact, as confirmed by Karen Campbell and Rachel Rosenfelds (1985) that men's networks are on average larger. Miller J. McPherson and Lynn Smith-Lovin (1982) showed that, in comparison with women of similar work status, age, education, or marital status, men belonged to larger organizations. They also found that men were located in "core" organizations that were large and related to economic institutions, while women were located in peripheral organizations, smaller and more focused on domestic and community affairs. Men's positions in the voluntary network were much more likely to provide access to information about possible jobs, business and chances for professional achievement. Women's positions were more limited to information about the domestic realm.

John Beggs and Jeanne Hurlbert (1997) found evidence of horizontal segregation: males tended to be affiliated with associations with mostly male members. Daniel Brass (1985) found that women were not well integrated into men's networks, including the organization's dominant coalition, and vice versa. Women whose immediate work groups include both men and women were exceptions. Males associate in networks with other males and females associate with other females, even in the occupational networks (Susan Hanson and Geraldine Pratt 1991; Jonathan Marx, and Kevin T. 1992; Gary P. Green, Leann M. Tigges, and Irene Browne.1995; Bruce C. Straits 1998).

Family ties are the exception. Family ties tend to be gender-heterogeneous (Peter Marsden 1990; Susan Hanson and Geraldine Pratt 1991): Family members consist of both males and females. Thus, family ties may help overcome some network disadvantages for females because they may access male family ties. However, family ties also tend to have people who are homogeneous in resources.

These differences are related to what Nancy Folbre labels the structures of constraints, (Folbre: 1994) encasing women's lives because of society's attribution of child rearing as a female activity. Allison Munch, J. Miller McPherson, and Lynn Smith-Lovin(1997) showed that child rearing placed men and women in different

structural positions with respect to the flow of information and resources in social networks. Having a child had no statistically significant effect on men's network size but had a significant negative effect on women's. In particular, women whose youngest child was age 3 or 4 displayed significantly smaller networks than those with adult children. The effect of child rearing on network size is significant and gendered. During child rearing, the proportion of men's networks made up of contacts with friends declines, whereas the proportion of contacts with women and kin increases. This temporary change represents the primary effect of childrearing on men's networks.

Pippa Norris and Ronald Inglehart (2003), in a paper significantly subtitled "Bowling in Women's Leagues?" present a very comprehensive assessment of the status of social capital theory with respect to gender. Her reconstruction of Putnam's theory asked us to consider whether i) social networks and social trust matter for social cooperation, ii) social capital has important consequences for democracy, iii) social capital is declining in post-war America, and iv) women's move, away from the home and into the labor force, is a double-edged sword; it both increases opportunities for them to make new social connections and networks via the workplace and yet also simultaneously reduces the time available for community involvement. Putnam concluded that the reduction in social capital by this channel accounted for only a modest amount of the social capital deterioration. According to Norris and Inglehart, this conclusion, although at first glance correct, masks a significant change in the quality of social capital and therefore underestimates the effects of the change that took place. The change involves a move from bonding social capital, bringing together similar people, towards bridging social capital, bringing together people of different sort. Bonding social capital is more likely to carry negative externalities, whereas bridging social capital, according to the authors quoting Putnam, is likely to carry positive externalities.

Scholars conducting research on management within business schools have undertaken the analysis of networks to understand personal and organizational success, and in doing so, they have unearthed many gender differences in social capital endowments. Both theoretical structures (Burt 1998) and empirical data have been used to show that the links that men and women forge in their careers are different. Hermina Ibarra (1997) shows that networks of both men and women are homophilous, but women's networks are less homophilous than men's, i.e., women's networks contain more people of the other sex. Bevelander, Dianne, and Michael John Page (2011) study trust in relation to the size of networks and report that women tend to trust each other less in a risky professional environment compared to men. Though women were found to have the same scale social networks, they exhibit a greater reduction in aggregate network size at higher trust levels. In a recent article, analyzing the presence of actors, directors, and other movie technicians on a rich data set, Lutter (2015) was able to show that women suffer a "closure penalty". For Lutter, women's success strategy relies on being able to negotiate between diverse structures, whereas men's success strategy is favored by belonging to, or being the leaders of, cohesive strong network structures.

Whether showing differences by sex in social capital accumulation may be sufficient, providing a gendered approach for the social capital is still an open question. Anne Kovalainen (2004) asks whether the social capital approach is sufficient to extract the masculinity from sociological and economic agency and answers negatively. She analyzes the different uses of the concept by the most prominent (male) theoreticians,

Bourdieu, Coleman and Putnam, and concludes that the problematic stereotypical gendered assumptions on what is feminine and what is masculine are implicit in the theory and must be explicated and made visible. In a very stimulating contribution, Lisa Adkins (2005) also analyzes the concept of social capital in Bourdieu, Coleman and Fukuyama. She notices, “while the family is centrally located to the constitution, accumulation, mobilization, circulation and management of social capital, the social capital theorists tend not to offer any analysis or theorization of the family”. “The collective goods making up social capital [...] are often infused with issues of power”, and finally that “social capital theory operates with a strong gendered subtext [...] recognition of this subtext should lead feminists to separate with the social capital concept”. We somewhat disagree with Adkins due to her pessimistic conclusions; we connect the concept of social capital in section 4 where we try to provide a model of the centrally located basic unit (family?) and introduce the issue of power, in a way reflecting her observations.

The following list of stylized facts summarizes the evidence surveyed (see also Norris 2006):

- Men belong to a larger number of associations.
- The distribution of men and women among associations is not homogeneous: men associate more with men and women with women. Men’s network structures are more homophilous.
- The association’s men belong to appear to be of a higher social status.
- The structure of the networks that men and women belong to have different shapes: men’s success depend on belonging to closer, more cohesive groups. Women instead pay a “closure penalty”, men gain from it. Negotiating between groups is a winning strategy for women.
- Men and women have different kinds of social capital. When entering the labor force, women move from bonding social capital to bridging social capital, with possible larger positive externalities.
- Trust and its effects on economic growth appear to descend more easily from bridging (work related) rather than from bonding (kin related) social capital.
- The family is centrally located in the accumulation of social capital, and the relations within it are gendered.
- Beside information, other reciprocities, and trust, power is also an issue related to social capital.

In the rest of the paper, we assess gender differences in the life cycle accumulation of social capital, and we suggest a network structure that may be the underlying framework generating both our main result (social capital accumulation has a different age profile for the two sexes) and these other listed stylized facts.

3. Social capital in the life cycle: Italian evidence.

Edward Glaeser, David Laibson and Bruce Sacerdote (2002) introduced in the Economics literature a theoretical model of the formation of social capital as an optimal individual investment decision, contrasting somewhat with the group-based analysis approach. Most of the group-based analysis models emphasize the role of the institutions, norms, conventions, etc. at the group level rather than the individual level. In contrast, Glaeser et al. identify social capital as the person's social characteristics such as skills, charisma, ability to create networks, etc. Moreover, social capital is considered as part of human capital. One prediction of the model, confirmed in a U.S.A. dataset, is that social capital exhibits a lifecycle trajectory, first increasing and then declining with age. The advantage of this conceptualization is that it allows easier measurement, by using the number of individual linkages, and allows the authors to describe the curve of social capital, first ascending and then descending with age. Glaeser et al. use a dummy variable for female in the regressions and do not spell out gender differences in life cycle accumulation. In the Sociology literature, a similar framework was proposed by Steve McDonald and Christine A.Mair (2010) and tested on another U.S.A. dataset. They confirm the presence of a life cycle and draw different curves by sex. They make use of a different, somewhat less complex, statistical methodology than the one used by Glaeser et al.(2002).

The mathematical model and econometric specifications used by Glaeser et al.(2002) are both ampler and more flexible in the specifications. We use the Glaeser et al.'s methodology and model to investigate its theoretical predictions as well as sex differences using data on Italy from a National Survey called the "Multiscopo" (Multipurpose Survey). "Multiscopo" is run by I.S.T.A.T., (the national statistical agency) and began in 1993. It was designed for the production of information on individuals and families, contributing to the creation of datasets helpful for understanding the social framework of the country. "Multiscopo" consists of seven surveys that cover the most important topics of social life: an annual survey on aspects of everyday life, a quarterly survey on tourism and a survey on five themes (health conditions and use of health services, citizens and leisure, security, families and social themes, use of time) rotating every five years.

We make use only of two years (1997 and 2011) to evaluate the stock of social capital in these two years and the changes in these 15 year windows. Multiscopo does not have a panel or longitudinal structure; we are not able to produce time-changing characteristics of social capital but rather comparisons over time.

Glaeser et al. 2002 use the total number of memberships in organizations as a good proxy to identify the total amount of social capital. They emphasize that in this case, membership represents a stock variable that may partly explain the investment decisions of the individuals. In the literature on social capital, as discussed above, this measure can be recognized as linking social capital or the so-called "weak ties". We will follow this approach of measuring the weak ties in our dataset. Thus, we construct a single variable that sums up the memberships of each individual at year 1997 and year 2011.

Multiscopo asks every individual over age 18 if he or she participates in one of the 8 types of organization from the grid: Political Organization, Labor Unions, Voluntary Service, Environmentalist Associations, Cultural Associations, Professional Associations, Rallies and Demonstrations. For each of these, the respondent can reply yes or no, and thus, 8 dummy variables between 0 and 1 may be generated. We list the average responses in Table 1. Answers are not mutually exclusive; respondents could answer either yes or no to any or all of the groups. Table 2 outlines, in percentage terms, some summary statistics for all these types of memberships by gender. At a first glance, there is no consistent change in percentage terms for the participation in these types of organizations.

Table 1: Summary Statistics for Civic Participation in Italy-“Multiscopo Survey”

Civic Participation	1997	2011
Political Organizations	0.04	0.07
Labor Unions	0.09	0.07
Voluntary Service	0.07	0.08
Environmentalist groups	0.02	0.02
Cultural Association	0.10	0.11
Professional Assoc.	0.06	0.06
Rallies	0.08	0.08
Demonstrations	0.06	0.06
<i>Number of Observations</i>	<i>48939</i>	<i>40629</i>

Note: Participation in percentages, Year (1997 and 2011)

The first consideration is that, although international comparisons of data from different surveys may always be misleading, when compared with similar statistics on data in the World Value Survey (Wim Van Oorschot, Wil Arts and John Gelissen, 2006), contrary to Putnam’s original hypothesis, these percentages do not appear to signal a particularly high participation in social organizations in Italy. Almost half of the people surveyed do not participate in any group listed in the grid.

Female participation on average is lower than male’s in particular in political organizations: 64% of women in Italy do not belong to any of the social groups listed in the grid.

To investigate the age profile, we sum for each individual the total number of organization’s memberships, generating in this way a single variable that will be considered as a proxy for linking social capital and will be our variable of interest.

Table 2. Summary Statistics for Civic Participation by sex

“Multiscopo 1997”	Female%	Male%	Gender Gap
Civic Participation in:			
Political Organizations	0.02	0.07	-0.05
Labor Unions	0.05	0.12	-0.07
Voluntary Service	0.06	0.07	-0.01
Environmental groups	0.02	0.02	0.00
Cultural Association	0.08	0.11	-0.03
Professional Assoc.	0.04	0.08	-0.04
Rallies	0.05	0.11	-0.07
Demonstrations	0.04	0.07	-0.03

“Multiscopo 2011”	Female%	Male%	Gender Gap
Civic Participation in:			
Political Organizations	0.02	0.06	-0.04
Labor Unions	0.05	0.09	-0.04
Voluntary Service	0.08	0.09	-0.01
Environmental groups	0.02	0.02	0.00
Cultural Association	0.09	0.12	-0.03
Professional Assoc.	0.04	0.08	-0.04
Rallies	0.04	0.08	-0.04
Demonstrations	0.06	0.07	-0.01

Table 3: Total Number of Membership by gender on 1997 and 2011

	#Number of Membership 1997			#Number of Membership 2011		
	Female	Male	Total	Female	Male	Total
0	19,765	15,084	34,849	16,330	13,049	29,379
1	3,380	4,520	7,900	2,677	3,378	6,055
2	1,193	2,032	3,225	1,066	1,522	2,588
3	481	936	1,417	452	708	1,160
4	166	472	638	221	343	564
5	61	193	254	109	178	287
6	32	87	119	37	70	107
7	11	50	61	18	25	43
8	2	16	18	5	9	14
Total	25,091	23,390	48,481	20,915	19,282	40,197

Figures 1 and 2 represent a quadratic approximation of the distribution of the variable constructed, by sex, over age classes. The data confirm both the gender differences present in the literature and the age profile suggested by Glaeser et al. (2002). In 1997, the figure shows that the starting point for both sexes is almost the same. The gender-neutral picture shows the same pattern found by Glaeser in U.S.A.

data. However, disaggregating by sex reveals a very different trend. The rise and fall of social capital is entirely due to men. The peak point happens between the ages of 35 and 45. Women’s social capital always declines, with no peak point after the end of schooling age of 18. In 2001, there is a peak point at a similar age as men’s but still with a lower level of accumulated social capital. Taking into consideration that Italian women’s social behavior in the last decades of the 20th century changed the participation rate in the labor market in 1997 was 46.4%³, whereas in 2011 it was 51.5%, suggesting a positive correlation between labor force participation and civic participation.

Figure 1: Life-cycle social Capital (Weak Ties) by gender - “Multiscopo” 1997

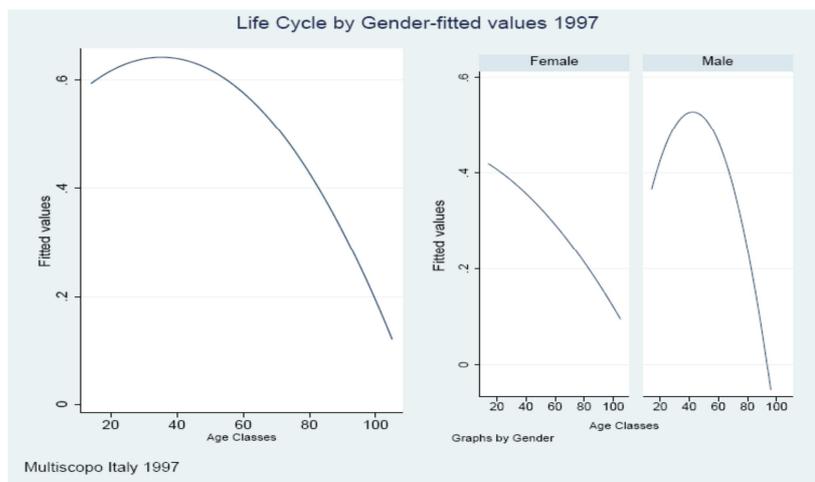
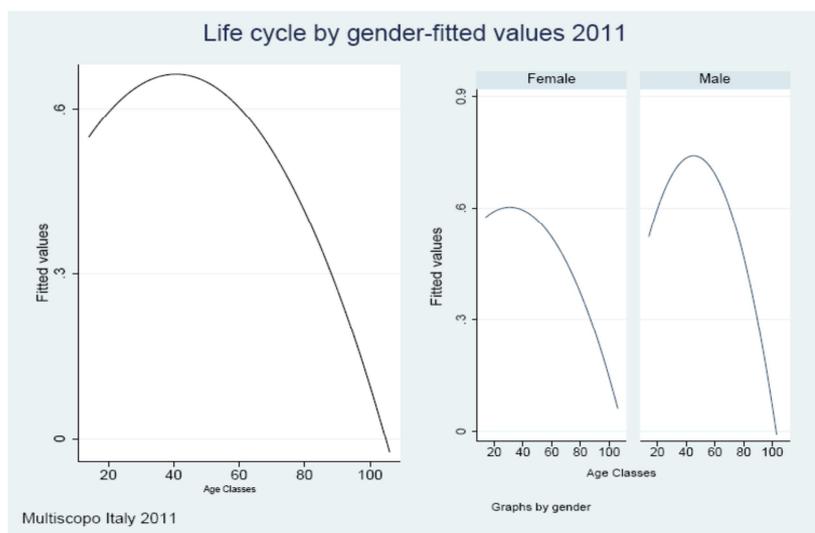


Figure 2: Life-cycle social Capital (Weak Ties) by gender - “Multiscopo” 2011



³ Source: Istat, Rapporto Annuale 2012

Table 4 presents the results of an OLS regression assessing the partial correlation between civic participation and other personal and educational characteristics.

The first regression (column 1) shows that civic participation is significantly correlated with sex and age. Both variables are significant at the 1% level, and the coefficient on the male dummy shows that social capital increases by 30% on average for males with respect to females. This large and strongly significant positive correlation between civic participation and the male sex is robust to other, richer specifications of personal traits, as shown in the other two regressions in column 2 (household characteristics) and column 3 (human capital). Because the positive 30% is calculated on the dummy for male, we expect the reciprocal negative correlation between female gender and civic participation. The second regression (column 2) includes household size, marital status, and number of children. These variables are all significant at 1%, except the number of children, significant at the 5% level. As expected, the coefficient on the number of children is negative: each additional child decreases civic participation by 1.3%, because using time for childcare competes with using time for participation. Being married and having a larger household size both increase civic participation, by 3% and 2%, respectively, showing that having a partner rather than being a single parent helps civic participation, and indicating a return to the scale of household management.

In the third regression, we introduce six dummies for education (i.e., one form of human capital accumulation). The literature suggests that there is a positive correlation between human capital accumulation and civic participation (James Coleman 1988). This result is confirmed by our data. We use, as a reference category, having only a high school diploma. Controlling for the variables in the first two regressions, we show that having a Ph.D. increases participation by approximately 80% and having a university degree by 37%. Never finishing high school significantly decreases civic participation; the lower the educational attainment, the less the degree of civic participation. Adding the human capital variables, the size and the significance of the male gender coefficient remains robust.

Table 4: OLS estimation for Number of Membership in Organizations, 1997

	(1)	(2)	(3)
	#Membership	#Membership	#Membership
Male	0.304 ^{***} (0.00878)	0.380 ^{***} (0.0125)	0.333 ^{***} (0.0123)
Age	-0.00613 ^{***} (0.000234)	-0.0159 ^{***} (0.000639)	-0.0109 ^{***} (0.000670)
N° of people in HH		0.0314 ^{***} (0.00566)	0.0274 ^{***} (0.00551)
Married		0.0210 ^{***} (0.00451)	0.0172 ^{***} (0.00439)
Number of Children		-0.0126 ^{**} (0.00481)	0.00164 (0.00474)
Ph.D.			0.814 ^{***} (0.123)
University Degree			0.378 ^{***} (0.0317)
High School (2-3 year)			-0.0335 (0.0349)
Medium School			-0.296 ^{***}

			(0.0213)
Elementary School			-0.402 ^{***}
			(0.0194)
No qualification			-0.417 ^{***}
			(0.0261)
Illiterate			-0.447 ^{***}
			(0.451)
Constant	0.616 ^{***}	1.065 ^{***}	1.053 ^{***}
	(0.0123)	(0.0461)	(0.0482)
<i>N</i>	48481	21227	21227

Standard errors in parentheses

⁺*p* < 0.10, ^{*}*p* < 0.05, ^{**}*p* < 0.01, ^{***}*p* < 0.001

Reference category for Education: Diploma;

Table 5 presents the same regressions shown in Table 4 for the year 2011. The gender coefficient is still quite large, approximately 20%, contrasting with approximately 30% in 1997. It is still robust to adding control variables. However, the gender gap in civic participation is lower than fifteen years earlier.

Table 5: OLS estimation for Number of Membership Organization 2011

	(1)	(2)	(3)
	#Membership	#Membership	#Membership
Male	0.203 ^{***}	0.194 ^{***}	0.190 ^{***}
	(0.00993)	(0.0101)	(0.00986)
Age	-0.00486 ^{***}	-0.00318 ^{***}	0.000998 ^{**}
	(0.000254)	(0.000338)	(0.000363)
N° of people in HH		-0.0635 ^{***}	-0.0395 ^{***}
		(0.00696)	(0.00678)
Married		-0.0287 ^{***}	-0.0142 ^{***}
		(0.00429)	(0.00419)
Number of Children		0.0889 ^{***}	0.0695 ^{***}
		(0.00914)	(0.00890)
Ph.D.			0.532 ^{***}
			(0.0860)
University Degree			0.197 ^{**}
			(0.0679)
High School (2-3 year)			0.0687
			(0.0765)
Medium School			-0.0322
			(0.0897)
Elementary School			-0.0974
			(0.100)
No qualification			-0.232 ^{***}
			(0.0660)
Illiterate			-0.341 ^{***}
			(0.0686)
Constant	0.624 ^{***}	0.704 ^{***}	0.797 ^{***}
	(0.0144)	(0.0238)	(0.0686)
<i>N</i>	40197	40197	40197

Standard errors in parentheses

⁺*p* < 0.10, ^{*}*p* < 0.05, ^{**}*p* < 0.01, ^{***}*p* < 0.001

Reference category for Education: Diploma;

This may reflect structural changes in the Italian labor market. Women's labor participation and employment rates continued to increase during the period 1997-2011, as they had started to do in the 70's. This increase was accompanied by labor market and pension reforms. In 1997 the so-called "Pacchetto Treu" (Law **196/1997**) introduced new flexible contracts allowing the hiring of a higher number of young women in temporary and part-time jobs. In 2003, the so-called Legge Biagi (**D.Lgs. 276/2003**) introduced up to 46 new types of flexible contracts. Between 1997 and 2007, the year when the worldwide economic crisis began, the Italian unemployment rate shrank from 11.6% to 6.2%. Also in 1997, law 449/1997 completed the pension reform initiated in 1995, progressively increasing women's pension age, a progression that produced increasing effects spreading over the entire period considered. These structural changes led to an increase in women's work-related social capital and more similarity between women's and men's networks. In addition, this process may have produced spillover effects, more social capital may produce more employment opportunities for women.

4. A theoretical interpretation

If one knits, one may become well aware of the fact that networks may be created that have very different structures. A bewildering array of patterns can be produced by using different combinations of only two movements, knit and pearl, each of them consisting of a slightly different stroke of the needles.

The social capital literature often uses visual depiction of networks, with the individual human beings connected sometimes by the same kind of links, sometimes by different kinds of links. The analysis of the literature reviewed until now, and our Italian results demonstrate the heterogeneity of social capital by age and sex, and show that the people entering the network are not genderless or ageless. They are embedded in different cultures, and their sex and age gives each a status, with correlated expectations about their behavior and other people's behavior towards them. It is therefore worth looking more closely at the structure of the social networks, trying to understand in more detail what is happening, what are the basic components and what structures are created.

There are two questions that can be asked, which did not receive an answer in the attempts to clarify what exactly is involved in the creation of social capital. The first question is the following: what are the units that are connected by the networks? Are they single individuals, groups, or both? And do they make a difference for the amount of social capital available and the amount of trust produced?

The second question is the following: are all the units in the network equal, or are they different in status due to some specific characteristics of the units being connected? And if there are differences, what is the consequence for the amount of social capital and the trust produced?

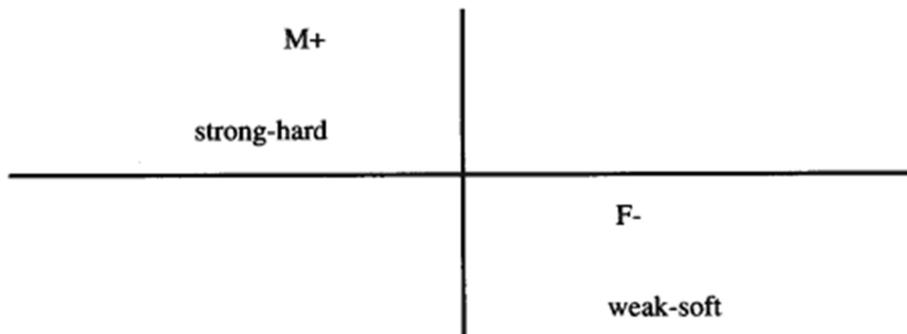
The answer to the first question is that the units that create the networking may be individuals, but what is connected are mostly groups of individuals linked by a voluntary or by an institutional association. However, the resulting network may be of different strength and of different quality with respect to the capability of the individuals to produce bonding, bridging or linking social capital. Thus, their capability to produce trust. Both the upper class country club and the working class

bowling league are civic society associations. Their effects on social capital available to their members and on society are different.

The answer to the second question is that individuals are different, and the different quality of the associations they enter reflects such differences. They are different according to many characteristics, each with its social value. One of the most basic characteristics of human beings is their biological sex, and, in our societies, the cultural construct based on this difference, gender, attributes to the male sex a higher social value.

Julie Nelson (1994) depicts gender as an ordering that tends to associate positive values to masculine characteristics and negative values to feminine characteristics, to persuade women to obey men and to persuade men of their right to command women, as illustrated in Figure 3:

Figure 3: A graphics representing gender ordering



Source: authors' elaboration after Nelson (1994)

This process of ordering and evaluating affects power in society. It is not the only process of ordering and evaluating existing in society, but it is basic and important enough so that its role can be detected in many social and economic outcomes - outcomes of relevance to the entire society, not just to women- which would be unintelligible without taking gender into account.

As mentioned in the quote by Bowles and Gintis, and as noted by many authors, mainstream economic theory is built on an abstract model of the market where exchange takes place between undifferentiated "representative agents". The economic agent has no gender and no social status. He is a rational perfectly informed utility maximizer.

Imagine that the individuals entering in social networks are the same as the "economic agent", all alike - no gender, identical status. If such is the case, the group to which they belong would be a simple network, different from other networks only in the number of members. There would be no room for an internal hierarchy within the group. And, there would be no way to establish a ranking of networks, with some networks more conducive to trust and positive economic outcomes than others.

If instead, the agents we imagine entering in the network are differentiated by gender - and by other elements of status, but gender would be sufficient – then a network with the same number of people would be more or less important to the production of social capital and trust.

The alternatives can be grouped in the matrix of possibilities below:

Figure 4: Individuals and Groups by Status

	Individuals	Groups
Same status	Simple network	No dominant network
Ordered status	Hierarchy in the group	Dominance of some networks over others

A further development in Economics makes use of the so-called “overlapping generation models” (Diamond 1965). In these models, the “agents” are undifferentiated except by age. They can belong to different cohorts, usually two, the young and the old, and sometimes three, the young, the adults and the old. By analogy with the overlapping generation models, we can model a basic human group where people are different only with respect to two characteristics, age and sex, and attribute a value to these characteristics.

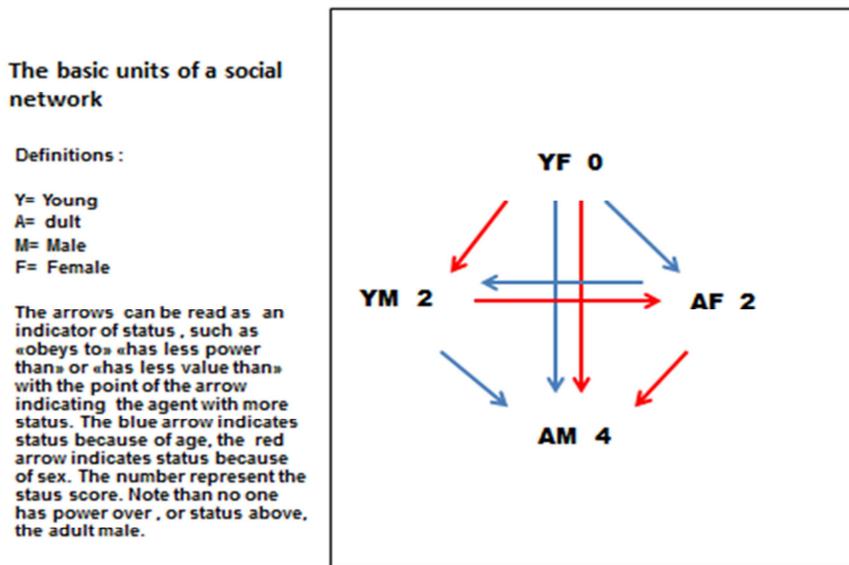
Following similar graphic representations of the social capital networks introduced in the literature by Burt (2000), we propose a simple graphic model of the network. Burt representations are of networks connecting ageless and genderless people. In our representation, instead, people can be either young or adults and either male or female. These characteristics carry a value: adults are worth more than youths, and therefore they have the power to tell the young what to do.

Males are worth more than females and therefore they can tell females what to do. More value, in this setting, corresponds to more power.

If we limit ourselves to these two characteristics, we have 4 kinds of agents: young women, young men, adult women, adult men. The adult men are at the top of the value and command chain. They are worth more, and can tell what to do to anybody: to adult women, because they are men, and to young men because they are adults. Nobody is worth more than they are, and nobody can tell them what to do. Young women are at the bottom of the social hierarchy. Young men are worth more than young women because they are men. Adults, both men and women, are worth more because they are adults. The authority of the adult men over the young women is double: as a male and as an adult.

Figure 5 depicts the structure of a basic unit of human society, with the minimum number of agents conceivable.

Figure 5: The basic Units of Social Networks



We can use this scheme to count a social "power score". In this simple setting, the young woman has 0 score, because she has less value than anybody and no command over anybody; the adult male has score 4, because he has command over the young men, the adult woman, and double power over the young woman as a man and as an adult. The scores are reported in the picture. In this particular picture, the adult woman and the young man appear in a balance, with the same score power and the right to tell the other what to do on the basis of one characteristic.

In reality, age is not a dichotomous variable, because it does not assume only two values, young and old. Age is a continuous variable, changing every day. One is not either young or adult: one is a baby, then a child, then an adult, then old. So, in reality, the male child has to obey the adult woman, but, as he grows into an adult man, he gets to tell her what to do and to gain social value with respect to her. The balance of the two central arrows lasts but an instant: the moment the young man comes of age, the balance of power, the same power score, between young man and adult woman disappears.

The power score we attributed to people is a function of the number of people we include in the network. If we add one more person, with an intermediate value, for example, one more adult woman, the power score of the adult man above her increases to 6. The gap between him and the young girl with 0 power score increases.

Age and gender are not the only status characteristics, in a society, that are valued and given power. With two characteristics, each assuming a binary form, like in the structure presented, we have $2 \times 2 = 4$ combinations, and a maximum score value of 4.

We can consider the effect of adding new status characteristics. For instance we can add wealth, coded as "rich" or "poor". Then, we can draw a structure with $2 \times 2 \times 2 = 8$ basic types, with a rich adult man at the top, and a poor young girl at the bottom. Such a structure allows the establishment of a larger number of relations between

people with the same value score. Adding more characteristics will dilute the overall effect of each single characteristic: A woman can offset the negative-value effect of being a woman by being rich. It also increases the gap in value between the most powerful rich adult man and the least powerful poor young girl. A network with a larger number of status characteristics is able to give more power to those at the top.

If we visualize a basic network unit as above, whose members enter other units or groups, and we add the stylized fact of sex segregation due to homo-sociability, we come to understand how some groups come to possess more social value and more power than others. The power score of a group can be considered as the sum of the scores of its participants.

We can at this point make an assumption that mimics the utility maximization assumption made by economists. We may wish to assume that people act to increase their power score, under the constraint that the number of relationships each person can have is limited, and not all relationships are available to them in their particular contingency.

The result is a narrative that is able to explain the stylized facts emerging from the literature we quoted at the end of paragraph 2, and the shape and the change of the life cycle profile we evidenced in the Italian data.

This narrative is different from the standard one used in economics to explain gender gaps. The standard story in Economics relies on demand and supply forces. When we find gender gaps in wages or horizontal and vertical segregation we can attribute it to demand factors (discrimination: employers have a preference for hiring males and paying them more) or supply factors (women are engaged in other activities and do not like some fields and type of jobs). Both narratives are compatible with the data we found. We could tell a story that men discriminate by not letting women in some social groups, and women have too much domestic work and do not want to spend time with the football club. Asking whether our narrative, based on perception, sexual difference and power, is more or less able to explain our findings is not within the scope of this paper.

5. Conclusions

Using the Italian “Multiscopo” Survey, we describe the life cycle accumulation of social capital over age by sex. We found that the gender-neutral picture shows the same pattern found by Edward Glaeser et al. (2002) in U.S.A. data. However, disaggregating by sex reveals a very different trend. The rise and fall of social capital is entirely due to men. The peak point happens between the ages of 35 and 45. Women’s social capital, as approximated by our variable, always declines, with no peak point after the end of schooling age of 18. The regression results indicate that the gender gap in social capital accumulation narrowed between 1997 and 2011 by almost 10%. Following a modified version of Burt’s model (Ronald Burt 2000), we present a graphic representation of the social capital network introducing a gender differentiation as suggested by the work of Julie Nelson (1994) and an age differentiation. This interpretation is one of the possible theoretical explanations of our evidence.

References

- Adkins, Lisa. 2005. "The anatomy of a troubled concept" *Feminist Theory* 6(2)195-211.
- Aldrich, Howard, Pat R. Reese and Paola Dubini. 1989. "Women on the Verge of Breakthrough: Networking among Entrepreneurs in the United States and in Italy." *Entrepreneurship and Regional Development* 1:339-56.
- Bevelander, Dianne, and Pag, Michael John. 2011. *Academy of Management Learning and Education* 10(4) (December) 623-642
- Blau, Francine, and Lawrence Kahn. 2000. "Gender differences in Pay", *Journal of Economic Perspectives*, Volume 14, issue 4, pages 75-99.
- Bourdieu, Pierre. 1983. "The forms of capital", in: *John G. Richardson, ed. Handbook of Theory and Research for the Sociology of Education*, pp. 241-58. New York: Greenwood Press.
- Beggs, John J. and Jeanne S. Hurlbert. 1997. "The Social Context of Men's and Women's Job Search Ties: Voluntary Organization Memberships, Social Resources, and Job Search Outcomes." *Sociological Perspectives* 40(4) 601-22.
- Bowles Samuel and Herbert Gintis. 2002. "Social Capital and Community Governance" *The Economic Journal*, 112 (November) 419-436.
- Brass, Daniel J.. 1985. "Men's and Women's Networks: A Study of Interaction Patterns and Influence in an Organization." *Academy of Management Journal* 28 (2): 327-43.
- Burt, Ronald S. 1992. "Structural Holes" *Cambridge MA Harvard University Press*
- Burt, Ronald S. 1998. "The gender of social capital" *Rationality and Society*. February vol. 10 no. 1 5-46
- Burt Ronald .S.. 2000. "The Network Structure of Social Capital", in *Robert I. Sutton and Barry M. Stow eds., Research in Organizational Behavior*, Greenwich, CT, JAI Press.
- Campbell, Karen E. and Rachel A. Rosenfeld. 1985. "Job Search and Job Mobility: Sex and Race Differences." *Research in the Sociology of Work* 3: 147-74..
- Coleman James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology*, 94, pp. 95-120.
- Diamond, Peter Arthur. 1965. "National debt in a neoclassical growth model." *American Economic Review*, vol. 55, pp. 1126-50.
- Foschi, Martha. 2000. "Double Standards for Competence: Theory and Research." *Annual Review of Sociology* 26: 21-42. *Social Psychology Quarterly* 1994, Vol. 57, No. 4, 326-339 *Gender and Double Standards in the Assessment of Job Applicants**

- Foschi, Martha. 2004. 'Blocking the use of gender-based double standards for competence' in *Gender and Excellence in the Making, Office for Official Publications of the European Communities, Luxembourg*, pp. 51-56.
- Folbre, Nancy. 1994. "Who Pays For The Kids?": *Gender And The Structures Of Constraint*, Routledge
- Glaeser Edward L., David Laibson and Bruce Sacerdote .2002." An economic approach to social capital" *The Economic Journal*, 112 (November), F437–F458.
- Goldin, Claudia, and Cecilia Rouse. 2000. "Orchestrating impartiality: The impact of "blind" auditions on female musicians." *American Economics Review* 90:715-741.
- Goldin, Claudia and Larry Katz. 2001. "Human Capital and Social Capital: the Rise of Secondary Schooling in America, 1910–1940", in: R. Rotberg, ed. *Patterns of Social Capital*, Cambridge: Cambridge University Press.
- Granovetter, Mark. 1973."The Strength of Weak Ties" *American Journal of Sociology* 6:1360-80
- Granovetter, Mark. 1982."The Strength of Weak Ties: A Network Theory Revisited" in Marsden, Peter V. and Nan Lin (eds.) *Social Structure and Network Analysis Beverly Hills, Sage*, 105-130
- Green, Gary P., Leann M. Tigges, and Irene Browne.1995."Social Resources, Job Search, and Poverty in Atlanta." *Research in Community Sociology* 5: 161-82.
- Ibarra, Hermina. 1997. "Paving an Alternative Route: Gender Differences in Managerial Networks" *Social Psychology Quarterly* 60:1 92-102
- Ibarra, Hermina.1992. "Homophily and Differential Returns: Sex Differences in Network Structure and Access in an Advertising Firm" *Administrative Science Quarterly* 37:422-447
- Ibarra, Hermina 1993. "Personal Networks of Women and Minorities in Management: a conceptual framework." *Academy of Management Review* 18(1)56-87
- Ibarra, Hermina .1995. "Race, Opportunity and Diversity" in *Social Circles*
- Hanson, Susan and Geraldine Pratt. 1991. "Job Search and the Occupational Segregation of Women" *Annals of the Association of American Geographers* 81: 229-53
- Kovalainen Anne. 2004. "Rethinking the Revival of Social Capital and Trust in Social Theory: Possibilities for Feminist Analyses of Social Capital and Trust" in Marshall, B.L.and Anne Witz (eds.) *Engendering the Social: Feminist Encounters with Sociological Theory*. Maidenhead and New York: Open University Press, 155-170
- Lin, Nan. 2000."Inequality in social capital" *Contemporary Sociology*, Vol. 29, No. 6 (Nov., 2000), pp. 785-795
- Lin, Nan. 2002. *Social Capital: a Theory of Social Structure and Action* , Cambridge, Cambridge U.P.

- Lutter, Mark. 2015. "Do Women Suffer from Network Closure? The moderating Effect of Social Capital on Gender Inequality in a Project-Based Labor Market, 1929 to 2010.
- Marsteden, Peter V. 1990. "Network Diversity, Substructures, and Opportunities for Contact." Pp. 397-410 in *Structures of Power and Constraint*, edited by C. J. Calhoun, M. W. Meyer, and W. R. Scott. New York: Cambridge University Press.
- Marx, Jonathan and Kevin T. Leicht. 1992. "Formality of Recruitment to 229 Jobs: Variations by Race, Sex and Job Characteristics." *Sociology and Social Research* 76: 190-96.
- Mauro, Luciano and Francesco Pigliaru. 2011. "Social Capital, Institutions and Growth: Further Lessons from the Italian Regional Divide," *Working Paper CRENoS 2011, 03, Centre for North South Economic Research, University of Cagliari and Sassari, Sardinia.*
- McDonald Steve. 2011. "What's in the "old boys" network? Accessing social capital in gendered and racialized networks" *Social Networks* 33, 317-330.
- McPherson, J. Miller and Lynn Smith-Lovin. 1982. "Women and Weak Ties: Differences by Sex in the Size of Voluntary Organization." *American Journal of Sociology* 87: 883-904
- Moore, Gwen. 1990. "Structural Determinants of Men's and Women's Personal Networks." *American Sociological Review* 55: 726-35.
- Munch, Allison; McPherson, J. Miller; Smith-Lovin, Lynn. 1997. "Gender, children, and social contact: The effects of childrearing for men and women". *American Sociological Review*, Vol 62(4), Aug 1997, 509-520. <http://dx.doi.org/10.2307/2657423>
- Nelson, Julie. 1996. "A Feminism, Objectivity and Economics" *Routledge and Kegan Paul, New York.*
- Norris, Pippa, e Inglehart Ronald. 2003. "Gendering Social Capital: Bowling in women's leagues?" *Mimeo. Proceedings of the conference on Gender and Social Capital, St. John's College, University of Manitoba. Available at* <http://www.hks.harvard.edu/fs/pnorris/Acrobat/Gendering%20Social%20Capital.pdf>
- Norris, Pippa. 2006. "Gender and Social Capital". *The Oxford Handbook of Social Capital. Ed. Dario Castiglione, Jan van Deth, and Guglielmo Wolleb. Oxford: Oxford University Press.*
- Putnam, Robert D. with Robert Leonardi and Raffaella Y. Nanetti .1993. "Making Democracy Work", *Princeton, Princeton University Press.*
- Sabatini Fabio. 2004." Il concetto di capitale sociale nelle scienze sociali. Una rassegna della letteratura economica, sociologica e politologica" *Studi e Note di Economia, n. 2, 2004, pp. 73-105.*

Sabatini Fabio. 2009. "Social Capital as Social Networks: A New Framework for Measurement and an empirical analysis of its determinants and consequences" *Journal of Socio-Economics*, n. 38(3), pp. 429-442.

Smith-Lovin, Lynn, and J. Miller McPherson. 1992. "You Are Who You Know: a Network Approach to Gender" Pp 223-251 in *Theory on Gender/Feminism on Theory* edited by P. England. New York, Aldine.

Straits, B. C. 1998. "Occupational Sex Segregation: The Role of Personal Ties." *Journal of Vocational Behavior* 52: 191-207.

Van Oorschot, W.J.H.; Arts, W.A.; Gelissen. 2006. "Social capital in Europe. Measurement and regional distribution of a multi-faceted phenomenon" *Published in: Acta Sociologica*

Word Bank

2013. <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTSOCIALCAPITAL/0,,contentMDK:20642703~menuPK:401023~pagePK:148956~piPK:216618~theSitePK:401015,00.html> (accessed November 2, 2013)