

THE DIMENSIONS OF SOCIAL CAPITAL

by

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## ABSTRACT

This study called into question the rationale and methods used by researchers used to measure levels of social capital, particularly Putnam (1995), Paxton (1999), and Park (2006). A central purpose to this study was to partially replicate and extend the work of Park, who theoretically derived four dimensions of social capital. I develop measures of each dimension and then regress each on the variables of age, sex, race, ethnicity, marital status, education, income, and religiosity. This created four sets of outcomes from which I drew conclusions about the dimensionality of the social capital concept. Based on the low percentage of variance explained by the models and the fact that many coefficients reverse signs from one model to the next, I conclude that these dimensions do not represent four parts of a single, underlying construct. This was counter to both Paxton and Park's conclusions. The results of this study also offer a way to examine the effects of subgroups on each dimension. In addition, Park's hypothesis of "coffeeing together" was tested and found to be inconsistent with the descriptive results. Recommendations were made for future applications of social capital research and an alternative hypothesis was cited as a promising way to conduct subsequent studies.

## ACKNOWLEDGMENTS

Without the benefits of social networks; the connectedness and resources of communities, cultural and intellectual institutions at my disposal, and the wisdom of my mentors, social fragmentation is what would have kept me and many other non-traditional students from ascending into higher education. I am indebted to those networks of individuals who reached out and pulled and pushed me up: my parents, my teachers, coaches, colleagues, fellow scholars, and my family. Without the privileges, knowledge, trust, and opportunities within these relationships I surely would have faltered. I am obliged to investigate the one thing that could explain both my own biography and the history of this democratic nation.

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## CHAPTER ONE: INTRODUCTION

### Overview

The main objective of this research is to identify a model of social capital and to test it in relation to a set of background variables. Social capital, according to Portes (1998:2), "...does not embody any idea really new to sociologists," as it has been one of most nuanced and controversial topics since the beginning of social science research (e.g. Tocqueville 1835, Tonnies 1887, Durkheim 1895, Hanifan 1916, Nisbet 1953, et cetera). Portes (1998) continues, stating that recently it has been one of the most frequent exports from social theory into everyday language, and by some it is touted as something of a restorative tonic for the ailments of society. This is largely due to the popularity of a particular social researcher's work on the matter; Robert Putnam (1993, 1995, 2000). Social capital, according to Putnam (1995) is defined as "networks, norms, and trust – that enable participants to act together more effectively to pursue shared objectives." Previous work on social capital by theorists Pierre Bourdieu (1977, 1980, 1983) and James Coleman (1988) was widely recognized among academics, but did not receive the fanfare and political spotlight that Putnam had. This was because Putnam had implicated a much broader, far reaching population than Bourdieu and Coleman had focused on: communities, states, and entire nations.

Bourdieu (1980, 1983, 1990) divided the broad concept of capital into several different distinctions: economic, cultural, social, and symbolic. Economic capital entails those resources which have an exchange value. Cultural capital includes the knowledge, diplomas, certifications, legal licensure, or education that an individual can earn to attain higher status in society. Symbolic capital is a resource that can be attained by way of social honor or prestige. Finally,

Bourdieu (1983) defined social capital as the resources, support, or services gained by simply being part of a group, or extended network by virtue of one's network position.

Coleman's (1988) specific purpose was to build off of the previous idea of human capital (Schultz 1961, Becker 1964) and to introduce the concept of social capital in relation to the production of human capital. Particularly this framework was set-up to test for the prevalence and effect of the relationship of lack of social capital to different indicators of it: grades, graduation, demographics, and types of schools. Coleman (1988) explained social capital as producing human capital in response to high amounts of network trust, information flow, and positive, reciprocating relations. In each of the social capital re-interpretations by Bourdieu (1980), Coleman (1988), and Putnam (1995), education was of concern as an indicator and/or outcome of the effects of the concept. The research at hand particularly aimed at identifying whether or not education predicted different types of social capital.

With the emergence of these varied theoretical perspectives on social capital, other researchers (Portes 1998; Paxton 1999; Park 2006) have shown how difficult it is to couple theory to measurement, produced countering results, and put Putnam's thesis and popularized conclusions in question. Pamela Paxton (1999), inspired by Putnam's work, constructed a model with three dimensions of social capital: social trust, institutional trust, and satisfaction with relationships (time spent socially and self-reported levels of satisfaction). From that work another researcher, Park (2006), used Paxton's model to investigate social capital but added another dimension to it: social tolerance.

A few of the problems that researchers still face are how to operationalize social capital coherently within various theoretical frameworks, what level of society it applies to (individual,



group, community), and whether social capital itself is a cause of various outcomes, an effect, or both. Portes (1998) takes note of these issues by citing the circular nature of Putnam's logic: "equating social capital with the resources acquired through it can easily lead to tautological statements" (p. 5). Both Coleman's and Putnam's methods and theses led Portes to construct four criteria for logical inquiry into the concept of social capital in order to sort out the issues others had faced. Portes (1998:20-21) states that a researcher must start...

first, [by] separating the definition of the concept, theoretically and empirically, from its alleged effects; second, establishing some controls for directionality, so that the presence of social capital is demonstrably prior to the outcomes that it is expected to produce; third, controlling for the presence of other factors that can account for both social capital and its alleged effects; fourth, identifying the historical origins of community social capital in a systematic manner.

Putnam's work violated these criteria but nonetheless made a deep impression on the media, politics, and laypeople alike. Putnam's (1995) thesis states that beginning in the early 1950s, civic life in America began to break down and people were becoming more socially fragmented. He cited decline in official group membership like bowling leagues, PTA, and Elk's clubs as mounting evidence of the trend. "Like its predecessors, Putnam's thesis sparked a huge debate both in the academic and popular press" (Paxton, 1999). Unlike its forerunners, it instantly gained him political notoriety because of the negative societal implications of his results. "Although social capital was theorized by Coleman (1988) and Bourdieu (1983) as a feature of groups, Putnam (1993) brought the concept into macrosociological theory by claiming that it could be aggregated and influence effective government" (Paxton, 2002).

Putnam (1995) constructed a state-level social capital index for each state, consisting of numerous variables that he considered indicators of social capital using the General Social Survey (GSS). He summed the means from questions on political participation, voter turnout,

volunteerism, time spent socially, trust, and group memberships creating a combined index score for each of the 50 states. He then correlated each state index to different outcomes like crime, education, and the like. He concluded that social capital was in decline and that America is falling apart socially.

Portes (1998:5) points out that Putnam's operationalization of the idea of social capital is tautological in that "defining social capital as equivalent with the resources thus obtained is tantamount to saying that the successful succeed." Paxton (1999) argues that certain variables, like voter turnout and volunteerism which comprise part of the index, do not actually measure social capital because they should be considered an advantage of having social capital, not be measured as social capital itself. She states that "the lack of an obvious link between theory and measurement has, in some cases, led to the use of questionable indicators of social capital" (p. 90). As far as group membership as a valid dimension is concerned, there have been several types of objections by scholars to this notion: that the groups (bowling leagues, Elks Clubs, et cetera) which were analyzed are antiquated and have been replaced by more modern types of groups and less institutionalized socialization (Etzioni 2001), that Americans interact informally and network instrumentally without use of group memberships (Robinson and Martin 2010), and that technology has adapted our social environments to electronic and internet-based socializing and that the amount of collaboration done with technology has dramatically increased (Clawson 2001). The thesis, in short, is that we have as much social capital as ever but accumulate and deploy it in more modern, technologically dependent ways. Park (2006) even suggests that a *rise* in overall social capital levels has occurred since 1994 and that this matches up with the emergence of the use of "third-places," i.e., bookstores, barber shops, internet cafés, and

especially Starbucks Coffee shops as loci of interaction and social capital, vs. Elk's Clubs, Kiwanis groups, and bowling leagues. The form but not the amount of social capital has changed. Park (2006) suggests that Americans are "coffeeing together" instead of "bowling alone." He argues that these "third places" serve as hubs for social interaction, networking, and junctures of community involvement.

Paxton (1999, 2002) and Park (2006), inspired by Putnam's work, set out to create their own indexes and contribute to the measurement and indexing of social capital. Paxton (1999) derived her definitions of social capital from the frameworks of Coleman (1988) and Bourdieu (1983) following the four logical criteria set down by Portes (1998). Paxton's dimensions of social capital are subjective ties to others that are considered: 1) positive, 2) trusting, and 3) reciprocal. She also treated social capital as the dependent factor, not the independent as Putnam had done. This was done to adhere to Portes' criteria for logical inquiry, to separate social capital from its alleged effects and to respect the possibility that social capital is more likely an indicator of beneficial resources gained, not an outcome. Paxton (1999) used several questions from the GSS including: satisfaction with relationships and city, social trust, trust in institutions, and time spent socially; and treated each year from 1974 to 1994 as a separate "test" group. Her confirmatory factor analysis (CFA) results were consistent with the argument that "social capital" was a multi-dimensional construct consisting of at least three dimensions: social trust, trust in institutions, and satisfaction with relationships.

Park (2006) built off of Paxton's three dimensional model and proposed a fourth dimension, which was social tolerance. He also tested Paxton's model compared to his own using confirmatory factor analysis. Park (2006) also tested three other alternative models to find out

which model fits the data best. “For additional models, three latent variables (social trust in others, social trust in institutions, and social connectedness) with 13 indicators and one latent variable (social capital) with 16 indicators will be analyzed using CFA” (p. 41). Park then used a comparative fit index, normed fit index, and incremental fit index to test each model. He found that his model was superior to all others tested, reaffirming that social capital was indeed multidimensional, and was comprised of more than three dimensions.

The research at hand extends Park’s (2006) work and asks one main question: (1) how are the four dimensions correlated to a set of standard background variables? We use the recent GSS 2010 data to explore Park’s dimensionality of social capital.

### Problem

There has been much theory about the nature of civic connectedness over nearly the last two centuries (e.g. Tocqueville 1835, Tonnies 1887, Durkheim 1895, Hanifan 1916, Nisbet 1953, et cetera), however, methodologists are still having difficulty seamlessly linking construct to measurement (Paxton 1999). Inconsistent definitions of social capital between Bourdieu (1983), Coleman (1988), Putnam (1995), and Paxton (1999), and arguments over which levels it applies to (individual, group, community) have created some difficulty in attempts to track social capital trends in America. Putnam’s (1995) work pointed to macro-level erosion of social life and drastic declines in civic engagement. One cannot assert that social capital is on the rise or fall in the face of so much scholarly opposition as to how it was defined and how the research was conducted (e.g. Ladd 1996; Portes 1998; Paxton 1999; Boggs 2001; Clawson 2001; Fischer 2001; Etzioni 2001; Fine, Hallett, and Sauder 2004; Robinson and Martin 2010). In response to Portes’ (1998) criteria for inquiry of social capital Paxton (1999) created her dimensions, and Park (2006)

followed with an extension of Paxton's work. The problem is that even by Park's own reckoning it is not known how independent variables like age, sex, race, marital status, education, income, and religiosity predict each respective dimension of social capital. "Future studies could also examine how levels of social capital differ across subgroups...it should investigate levels of social capital by gender, race/ethnicity, and educational levels" (Park:72). Identifying whether these variables correlate to each dimension and what is the directionality of each effect will help to shed light on whether these theoretical dimensions reflect a single, underlying concept or whether they are inherently different.

#### Purpose

The main purpose of this research is to investigate the predictive power of certain independent variables on each of Park's four dimensions of social capital; generalized trust, institutional trust, tolerance, and connectedness. This will add to the body of knowledge about social capital and inform researchers in their analysis of such. This will further disentangle the complexity of social capital and help to decide whether these dimensions represent a singular concept or are inherently different. This will shape future research about the nature of each dimension.

## CHAPTER TWO: LITERATURE REVIEW

This chapter will look at Putnam's thesis and its conceptual implications, and the social capital indexes that have been used to capture the essence of the sense of community in America. The first section will cover Putnam's theory, concepts, and conclusions to which each will be analyzed for usefulness and weakness and implicated in this research. Then, the social capital indexes constructed by Putnam, Paxton, and Park will be discussed.

### Putnam's Thesis

Putnam (1993, 1995, 2000) argued that since the end of WWII, America has become and is still becoming less socially engaged, less civically active, and more socially fragmented. Everything from card playing tables, to picnics, to bowling league memberships were in decline and this to Putnam was a sign of social disintegration. In his 1995 book titled "*Bowling Alone*," he used the metaphor quite literally, citing that bowling league membership had declined, and that this represented a much larger set of social phenomena; people were more isolated and less connected through these group memberships than ever before. He believed that the bowling alley for league members, like other communal meeting places for members of other affiliations like Elk's lodges, Bull Moose, Rotary clubs, PTA's, reading clubs, and the like, served as social hubs for connectedness, networking, and civic engagement. He also cited political participation, such as voter turnout, as a significant sign of how well a society was connected. His conclusion was that this trend of decline was dangerous for the integrity of a democratic society and he gained significant attention from politicians and media including President Bill Clinton and appeared on the cover of *People* magazine and was also featured on National Public Radio for an interview.

The reason why his research drew such attention is because of how it differed from previous theorists on the subject of social capital. Putnam diverged from the many prior theorists (Hanifan 1916, Bourdieu 1980, Coleman 1988) partly in his definition of the concept but mostly in his application of it. He saw social capital primarily as official group membership and participation, political norms, and trust between members. His approach differed from previous attempts because it was much more of a macro view in that he analyzed trends of group membership using the GSS and the Doyle Dane Bernbach Needham Lifestyle Surveys (DDB). The conclusions he reached revolved around indexes that he created to measure social capital on the level of each state. This implicated much more than just individuals and their immediate small groups, but each of the states individually, and the entire country as well. He summed each state's mean scores from each of the 14 indicator questions he chose. Questions on volunteerism, group membership, voter turnout, time spent socially, and trust comprised his dimensions of social capital. He compared these state social capital index scores and ranked the states as having higher or lower amount of social capital. Putnam then correlated his social capital index scores for each state to several different dependent variables. These variables ranged from things like each state crime rates, public education performance, amount of time spent watching television, and even self-reported physical toughness. He concluded that America was not participating in community group networks and events or even picnics as much anymore, that people's sense of trust in others and in institutions had been diminishing since WWII, that group memberships were in decline, and that the social bonds between citizens and neighbors were becoming more fragmented. His conclusions were that lower social capital levels were causing an increase in crime and poverty and that higher social capital index scores improve education and lower anomie. In addition, states with high crime, poverty, and time spent watching television had lower social capital levels.

These indexes are of particular importance to the study at hand because how they were constructed has been questioned by many others in attempts to track social capital.

### Issues with Putnam's Social Capital Index

Concerns surrounding Putnam's assertions typically took on two themes: his theoretical framework, and his methods. This section will deal with his conceptualizations. Some of the biggest theoretical critiques came from those who questioned his metaphor of "Bowling Alone" literally (Fine et al. 2004), finding that bowling rates are not in decline, only league membership, and that bowling is inherently a group activity. They referenced all the new non-league bowling events such as "cosmic," "midnight," or "black-light" bowling aimed at older teenagers and college students which have become very popular. Fine et al. (2004) point out that those who actually do bowl alone do so to further their performance in league competition or informal group play. Others pose evidence of countertrends to the assertion of decrease in PTA membership, unions, time spent socializing with friends, volunteerism, and charity (Ladd 1996). This is in direct opposition to the results that Putnam asserted with his combined index in that each of these single indicators was summed but that individually they actually have differing directionality. This suggests that these particular single indicators do not actually represent one underlying mechanism of social capital.

Researchers Robinson and Martin (2010) point out that the index has a limited definition of social capital as emphasizing group membership, and Putnam's observance of the disappearance of antiquated organizations as evidence for erosion of civic life seems a bit incomplete conceptually because the index did not account for the emergence of new technologically and internet-based communities. Clawson (2001) finds that there has been a



decrease in chapter-based social organizations but that phone calls, e-mails, and professional groups have increased. Etzioni (2001) alludes to how the variables in the index of social capital focus on these outdated groups and allow for an overgeneralization of generational effects with a “good ole days-ism” bias embedded. Putnam’s conclusions which were drawn from this social capital index were also seen to be contrary to Nisbet (1953, 1969) and other proponents of “mass society” who wrote about community decline and anomie at precisely the same time that Putnam argued civic life had reached its peak in America. The central issue was not that social capital was declining, but that how the index was constructed overlooked emergent new forms of association, affiliation and interaction.

A related issue: The social capital index was made up of 14 individual measures -- 14 allegedly interrelated community indicators of civic engagement. The indicators Putnam uses, he argues, are conceptually tied together with a single underlying property: social capital. The categories he used included: community organizational life, political engagement, volunteerism, informal sociability, and social trust. Although each of these so-called dimensions were not treated as separate categories, they were comprised of single indicators of behaviors from the GSS and DDB surveys which were then summed creating total indexes, not dimensional indexes. Fischer (2001:4) states that “if these behaviors all reflected some underlying property of individuals -- personal tendencies toward social connectedness and commitment -- then we would expect people who generally do one behavior to also generally do another. Do they? Not really.” The issue is not so much that he created a total overall index, but that he combined indicators that did not really belong together. According to Putnam’s own use of the term social capital, official group membership and participation are of greatest importance to the measure. But as Boggs

(2001:287) points out, “archaic” groups are the ones of importance to Putnam, and Robinson and Martin (2010) note that this focus misses the shift in norms of the day in that people are tending to be connected by informal ties, not group affiliations to things like the Rotary, Elk's, or Bull Moose Clubs. It is arguable that official group, face-to-face membership no longer dominates American culture as much as internet groups, electronic communications, and informal participation, so the former may not be valid indicators of social capital anymore. Even though informal gatherings such as picnics and card playing between neighbors or friends have declined, this may only represent a shift in norms of Americans, not a deficiency of socializing. In addition, both volunteerism and political engagement are unrelated variables to the rest in that they are very individualistic endeavors, and are many times done alone (Fischer 2001).

According to Paxton (1999), the reason why Putnam’s social capital indexes showed decline, contrary to other research at the same time (Ladd 1996), was because the operationalization was not derived from theory and he used single indicators, not dimensions. Paxton (1999) states that Putnam’s independent measure, voter turnout, is used as an indicator of social capital, when it should likely be seen as an outcome. The same is to be said of other parts of the model in that he constructs his social capital index on the basis of the 14 independent measures and loosely ties these state-aggregated scores to variables such as education, murder rate, and amount of time kids watch television. Putnam (2000:295-297) correlated the index to each of his chosen outcomes, yet paradoxically distances himself from the conclusive nature of the findings, “I do not offer the generalizations in this section as the final word...Of course the mere fact that social capital is correlated with good outcomes for kids does not mean social capital *causes* these outcomes or, conversely, that a social capital deficit is leading kids to take

wrong turns in life...parental education levels, poverty rates, family structure, racial composition...social capital itself is associated with these factors.” As he continues he contradicts himself, “social capital matters for children’s successful development in life. We can draw the same conclusion about the link between social capital and school performance” (p. 299). In addition Putnam goes on to state that he does not mean to “...imply that the link between, say, adult club attendance and school performance is simple, direct, and mechanical...and there are no magic bullets” (p. 301). Admittedly, he detaches himself from his results cautioning the reader’s interpretation, yet he still concludes that America is fragmenting and that this interpretation should drive policy decisions.

Portes (1998) points out that Putnam’s method of deduction leaves room for other explanations, that his retroactive analysis of differences does not shed light on a singular cause, and that his circular logic (using turnout as both an indicator and a result of social capital) is tautological. Essentially, to Putnam social capital is both a cause and effect in that social capital produces lower murder rates, higher education, and economic growth, yet its origin is contingent upon these effects and conditions. In response to this problem, Portes (1998:20-21) gives four criteria (1. separating the concept theoretically and empirically, 2. control for directionality, 3. control for confounding factors, and 4. identify the historical origins of social capital) for analysis of social capital with which Putnam fails to comply in his model:

In her studies, Paxton (1999 2002) conforms to each of these criteria with the exception of the fourth. Paxton’s (1999 2002) index proposes two components with three underlying dimensions: objective associations among individuals and subjective associations of a particular type- reciprocal, trusting, and involving positive emotions. She argues this to be a better way of

analyzing social capital in that it does not violate Portes' criteria for logical inquiries and because it is theoretically derived from both Coleman (1988) and Bourdieu (1977, 1980, 1983). From Bourdieu, she operationalizes the idea of social networks as being trusting and positive through her dimensions of satisfaction with social connections and of social trust. From Coleman she incorporates the ideas of connectedness and institutional trust as outcomes of norms and resources gained through extended and community networks. She treats the social capital index as the dependent variable instead of independent as Putnam does. She argues that this is a better starting point because it does not violate Portes' first criteria and because it separates social capital from its alleged effects. She stated that this was a much better version of a social capital index because the data fit her model well as tested by a chi-square, RMSEA, IFI, and the AGFI. Each showed significant fit to the data. As Park (2006) showed, however, her model still did not give credit to the full multi-dimensional nature of the concept. Park adds a tolerance dimension and subsequent CFA to test the fit.

Park (2006) constructed four dimensions of social capital to create a total index, building off the applied work of Paxton. These domains are: generalized trust, institutional trust, tolerance, and connectedness. Park analyzed the trends in each of these respective domains over time according to age, period, and cohort (APC). This was a statistical way to disentangle the effects of each generation on each respective dimension and to validate each as being separate and significant indicators of social capital. Park also combined standard scores from each dimension for a total social capital index (TSCI). The results of the total index method may be overgeneralized because they do not show how these dimensions vary according to latent

subgroups. That is where this study plans to extend Park's work by testing for significant relationships between socio-demographic variables and each dimension.

Putnam included voter turnout and volunteerism in his index. One researcher (Fischer 2001) points out that these are very individualistically done activities, and are not even conceptually indicative of social capital. That is why Paxton, Park, nor this study includes it as a dimension of social capital. Putnam treated his social capital index as the independent variable acting on education, crime, health, and the like, and implied a mechanical relationship between them in his descriptions of how the lack social capital caused lower education and poverty and how the lack of education caused lower social capital. He also warned his own readers not to draw spurious conclusions from the data. This is a big reason why Paxton and Park did the opposite and tested for significance of each dimension as the dependent variable instead.

The possibility that each of the four social capital dimensions might themselves be multi-dimensional is evident in studies such as Bobo and Licari (1989), who researched the willingness of individuals to extend civil liberties to groups like homosexuals, atheists, communists, racists, and militarists. They constructed an index for each group and compared tolerance levels. For the homosexual index, the same three questions were used from the GSS as in Park's study. This study showed that tolerance itself has latent dimensions to it and that it can vary based on other variables like religious affiliation. If tolerance varies based on religiosity, then this reinforces the need to test the predictive power of it or other socio-demographic variables on each dimension of social capital individually. This is significant to the research at hand because it asks the question, "how does each dimension of social capital differ positively or negatively in relation to these same and other independent variables?" If each dimension is being acted on by conflicting

independent variables, and/or if the same variables switch their coefficient directionality between dimensions, this indicates that they do not represent one underlying concept, but are instead empirically distinct and therefore, perhaps theoretically different.

## CHAPTER THREE: METHODOLOGY

Drawing heavily on the influence of Putnam, the operationalization of Paxton, and particularly extending the work Park, this study identifies the correlates of each of the four dimensions of social capital conceptualized by Paxton (1999) and Park (2006) using the 2010 GSS. This research partially replicates and extends the work of Park using these four dimensions and divides as such: generalized trust, institutional trust, tolerance, and connectedness. The control and independent variables are regressed on each respective dimension of social capital, hence generating four models to assess the effects that age, race, ethnicity, sex, marital status, education, and religiosity have on institutional trust, generalized trust, connectedness, and tolerance. This is done to see if each of these independent factors successfully predicts each dependent dimension. This will help to assess whether or not each dimension is representative of a singular underlying construct or if they are different conceptually, and what the results implicate.

### Dependent Variables

As for the four dimensions serving as the component variables of social capital, each will be scaled. The first, generalized trust (TRUST, FAIR, HELPFUL), will consist of three questions from the GSS. Each question is scaled from 1 to 3. Each scale will be recoded from the GSS scale to make a score of 1 equal least trustworthy/fair/helpful, 2 will equal the answer “depends,” and a 3 will be most helpful/trustworthy/fair. The total index for generalized trust will be from 3 to 9. This combined index was relabeled as GENTRUST.

Trust: Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?

Fair: Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?

Helpful: Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?

The second dimension of the social capital index, institutional trust, will be reverse coded so that the scale goes from 1 (“hardly any confidence”) to 3 (“great deal of confidence”). The total index for institutional trust will range from 6 to 18. This model was relabeled INSTRST. Just as Park (2006) does, the institutions which will be included in this index from the GSS only include the following:

Trust in Institutions: I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?

Congress, Executive Branch, Religion, Education, Television, Press

For the third dimension, social tolerance, or otherwise known as willingness to extend civil liberties to non-conformist groups, the GSS scaling will be recoded so that a 1 (allowed) will be 1, and a 2 (not allowed) will be a 0. This scaling allows for a total tolerance index range of 0 to 3. Park (2006) uses homosexuality as an indicator to tolerance and so this study will continue to build off of that one in the same fashion. This index was relabeled as TOL. The questions are as follows:

And what about a man who admits he is a homosexual?

Allow to speak in public: Suppose this admitted homosexual wanted to make a speech in your community. Should he be allowed to speak, or not?

Allow to teach in schools: Should such a person be allowed to teach in a college or university, or not?



Allow to keep a book at a public library: If some people in your community suggested that a book he wrote in favor of homosexuality should be taken out of your public library, would you favor removing this book, or not?

The fourth dimension, social connectedness, will also be reverse coded so that the scale goes from 0 (never) to 6 (almost every day), instead of 1 (everyday) to 7 (never), as originally listed in the GSS. These questions were asked in regards to time spent with neighbors, friends, relatives, and at a bar. This makes the total social connectedness index range from 0 to 24; although it is inconceivable that anyone could reasonably score a 24 unless they were spending every night with their friends, neighbors, and relatives at a tavern. Averages will be reported and compared. This model was relabeled as CONNECT. The questions are:

Neighbors: Spend a social evening with someone in your neighborhood?

Friends: Spend a social evening with friends who live outside your neighborhood?

Relatives: Spend a social evening with relatives?

Bar: Go to a bar or tavern?

Each of these questions will be indexed and then a multiple regression will be conducted to identify the effects that each independent factor has on each dependent index of social capital.

### Independent Variables

The independent variables of interest are age, education, income, and religiosity. In other studies (Coleman 1988; Pong, Lingxin, and Gardner 2005; Gillies and Edwards 2006; Bryan 2011) these factors have been shown to have effects on other measures of social capital. A descriptive analysis of the means of each dimension will be conducted and possible significant relationships between each dependent dimension and each respective independent variable will be identified.

The variable age, or AGE as it is called in the GSS, is a point scale from 18 (18 years old) to 89 (89 years old or older). Scores of 98 (don't know) and 99 (no answer) will be omitted.

For the independent variable of education using the GSS 2010, the question is labeled EDUC and asks about the highest number of years completed in school. This is a scale from 0 (no years completed) to 20 (doctoral work).

The third independent variable income is labeled INCOME06 in the GSS. This is a 26 point scale that divided total family income up into categories with ranges of \$2,000 per scale point incrementally increasing up to \$15,000 ranges per scaled point at the top. Points such as a score of 1 (under \$1000 per year), 2 (\$1,000 to \$2,999) go on up to a 24 (\$130,000 to \$149,999), and 25 (\$150,000 and up). Those who answered with a 26 (refused) will be recoded as a mean substitution score of 16.6 (approx. \$23,000) so as not to omit this group of respondents from the analysis, and not over- or under-estimate their income.

The last independent measure, religiosity, in the GSS is labeled RELPERSN and is posed as “To what extent do you consider yourself a religious person?” The scale is 1 to 4, one being very religious, and 4 being not at all. This will be reverse coded to show a higher score equaling a higher religiosity.

Each of these independent variables will be regressed on each dependent dimension of social capital. This will further the understanding of the effects of demographic compositions on the trends of these indexes. This research seeks to test which independent factors significantly relate to each dimension and to find out for how much variance each model accounts.

### Dummy & Control Variables

This study will also employ dummied variables: race, ethnicity, sex, and marital status. In the past there have been several studies (Moynihan, Rainwater, and Yancey 1965; Gardner 1983; McLanahan 1985, 1994, 2009; Garfinkel and McLanahan 1986; Astone and McLanahan 1991) which have found each of these variables to be associated with different outcomes such as education and income. Since they are implicated with other variables like time spent and institutional trust, they must be controlled.

The GSS variable RACE was controlled for by renaming it as 'Black' and coding it as a 1, while coding 'other' and 'white' as a 0. Ethnicity was also included from the GSS variable HISPANIC. This was done by recoding the variable HISPANIC to a 1, and all else (white and black) was coded to 0, and was relabeled as SPANIC. This will account for the differences in race and ethnicity when compared to the effect on each dimension of social capital.

The variable labeled in the GSS as SEX, was recoded from the original formulation (male = 1, female = 2) to female = 1, and male = 0. The third, marital status, or MARITAL as it is called in the GSS, is originally coded married (1), widowed (2), divorced (3), separated (4), never married (5), and no answer (9). Those respondents who were widowed and married will be renamed MARRIED and recoded as a 0. These groups of respondents were combined because widowed individuals never actually left the institution of marriage just as currently married people. The respondents whom answered the question as divorced or separated, will be renamed DIVORCED and coded as a 1. Those whom never married will be renamed SINGLE and recoded to a 1. This will help to sort out the differences of those whose marital status might affect their social capital.

## CHAPTER FOUR: ANALYSIS & RESULTS

### Analysis

An analysis of the descriptive statistics was conducted for each of the dimensions of social capital and the independent factors. A multiple regression was also done for each of the four models of social capital on each independent variable. In each model F values were identified, each independent factor was tested for significance, and directional relationships were identified between independent factors and each dimension of social capital.

### Results

Table 1 shows the means, standard deviations, and proportions for each of the independent variables for each model. For the generalized trust model, the mean scores for the GENTRUST index, highest year of school completed, age, income, and religiosity were: 5.91, 13.36, 48.00, 16.40, and 2.57, respectively. For the institutional trust model, the mean scores for the INSTRST index, highest year of school completed, age, income, and religiosity were: 10.92, 13.45, 47.84, 16.51, and 2.57, respectively. For the tolerance model, the mean scaled scores for the TOL index, highest year of school completed, age, income, and religiosity were: 2.51, 13.57, 47.84, 16.49, and 2.57, respectively. For the connectedness model, the mean scores for the CONNECT index, highest year of school completed, age, income, and religiosity were: 14.80, 13.36, 48.28, 16.41, and 2.60, respectively.

(Table 1 about here)

Table 2 shows the unstandardized regression coefficients, the standard error,  $R^2$  score for each model, and the number of respondents. The number of respondents for the generalized trust, institutional trust, tolerance, and connectedness models were: 1288, 1212, 1168, and 1350, respectively. A one-way analysis of variance indicates that each model for generalized trust,

institutional trust, tolerance, and connectedness are valid in their use of predictors with F scores of 37.35, 11.62, 27.16, and 22.54, respectively, each with a significance of .000. This allows one to reject the null hypothesis for each of the four models that the  $R^2 = 0$ . The generalized or social trust model accounts for 20.8% of the variance in amount of social trust. The institutional trust model accounts for 8.0% of the variance in an index composed of trust in Congress, executive branch, religion, education, television, and the press. The tolerance model accounts for 17.4% of the variance in willingness to extend civil liberties to homosexuals. Finally, the connectedness model accounts for 13.1% of the variance in time spent with friends, relatives, neighbors, and at a bar.

Not all independent variables were found to be significant predictors. For the generalized trust model: marital status, sex, and Hispanic were not found to be different than their controlled comparisons. Divorced and single individuals were no more likely to have higher general trust than married or widowed respondents. Females were no more likely to have a significantly different generalized trust than males. Hispanics were no more likely to trust people in general than non-Hispanics. Religiosity also had no significant effect on social trust. Education was found to be significant with one increment of year completed of school leading to a .193 increase in the social trust index. Age was also found to be significantly related to social trust with a one increment increase in age in years leading to a .029 increase in the GENTRUST index. Income was significant with a one increment increase in the income scale leading to a .032 increase in general trust. Finally, the variable black was found to be significantly related to social trust with a -.888 change in generalized trust index, compared to whites.

For the institutional trust model: education, age, income, and divorced were found to have insignificant effects on trust in institutions. Single respondents were more likely to trust

institutions than married ones with a .397 increase in the INSTRST index with a significance of .041. Females were more likely to trust institutions than males with a significance of .024 and a .310 increase in the index. Blacks and Hispanics both had significances of .000 and led to a .892 and 1.042 increase in the institutional trust index compared to whites. Lastly, a one increment increase in religiosity led to a .240 increase in trust in institutions at the .001 significance level.

For the tolerance model: income, single, and Hispanic were not found to be significant in predicting willingness to extend civil liberties to homosexuals. Education, divorced, and females were all related to increases in tolerance. A one year increment of years of education completed led to a .07 increase in the tolerance index at the .000 significance level. The divorced respondents reported an increase of .14 tolerance index with a confidence interval of 95% compared to their married counterparts. Females were more tolerant than males with a .187 increase in the index at the .000 significance level. Age, African Americans, and religiosity were all found to be significantly related to lower tolerance levels. A one unit increase in age led to a decrease of .01 in the tolerance index at the .000 significance level. African Americans tended to be less tolerant with a -.15 index score compared to whites. A one increment increase in religiosity led to a -.129 change in tolerance index scores at the .000 significance level.

Lastly, for the connectedness model: income, divorced, black, and religiosity were found to be insignificant in predicting time spent with neighbors, relatives, or at a bar. The variables single and education were the only significant ones (.000) and led to an increase in the connectedness index (1.414 and .188, respectively). Other significant factors were: age, female, and Hispanic. A one year increase in age led to a .05 decrease in connectedness with a significance of .000. Females were less socially connected with a -.609 index score compared to males with a significance of .007, after controlling for all other variables. Lastly, Hispanics at a

significance level of .001 were much less connected than whites with a -1.167 index score after controlling for all other variables.

(Table 2 about here)

## CHAPTER FIVE: CONCLUSION

### Conclusion

In light of the findings at hand, a few conclusions are clear: 1) each of the models were significant at the .000 level with the GENTRUST and TOL models accounting for the most amount of variance in the social trust and tolerance indexes at 20.8% and 17.4%, respectively, 2) none of the independent variables were significant predictors for all models, 3) after controlling for all variables, the effects of almost all of the independent variables reversed directionality between models, 4) the only independent factor that did not reverse direction between each model was years completed of education, with each model having an increase in associated index scores, 5) education and age were significant predictors of all models except institutional trust, 6) divorced and total family income were the weakest predictors of all models 7) Hispanics and African Americans were significantly more trusting in institutions than whites, yet were significantly less likely to trust people in general, 8) single respondents were significantly more connected than married respondents while Hispanics were significantly less connected than whites, 9) females were statistically the most tolerant, 10) the generalized trust model had the best predictive power out of all models, and the institutionalized trust had the least, 11) although the institutionalized trust model accounted for the least amount of variance and had the least amount of significant independent variables predicting it, of the significant predictors associated within it, it was ironically the only model which these independent variables did not switch directionality.

That fact the coefficient directionality of a lot of the effects of the independent variables reverse within (except the institutionalized trust model) and between dimensions poses several possibilities: A) they do not indicate a single underlying construct (social capital), B) the mixed effects represent more complexity to social capital than the models can account for, C) some



dimensions are satisfactory measures of social capital while others might not actually be a unified dimension, or D) all of the above. Based on the low  $R^2$  throughout and the reversibility of the signs of coefficients for most variables from model to model, a parsimonious conclusion is that these four dimensions do not represent a single, underlying construct. This counters Park's conclusions that their models' fit to the data is adequate but the results of this study offer a way to further delineate the effects of subgroups on each dimension and how varied the index scores can be merely based on demographic variables. If one were to get a more accurate picture of social capital, it must not be overgeneralized from an entire sample, but be analyzed individually by subgroup. This paints a much different picture than lumping together countering trends of directionality from an extremely diverse sample.

The two models with the most predictive power (generalized trust and tolerance) still have incredible amounts of conflicting directions of the coefficients within themselves. One might make the argument that if the inter-correlations between all models were high, they were in fact all latent dimensions of social capital, but even using the GSS one is not able to calculate those relationships because not all respondents were asked all questions making it impossible to do so. Even if these models are representative of uniquely different aspects of social capital, each with their own respective attributes and outcomes that they should not be treated as combined indexes as this loses the point of understanding how each individually affects and is affected by historical events and social evolution.

The institutional trust model had the least amount of accountability for variance and seems to not be associated with the other three models. It may be possible that the trust in institutions model was comprised of the wrong types of establishments, or that institutional trust is simply not

social capital. Park (2006) did add trust in media to Paxton's model, citing how the news can have an effect on public perceptions of organizations and government. As far as the tolerance model is concerned, even though it was a good fit of the data in Park's study, it failed to do what Paxton did: link his construct to existing theory, thus, violating Portes' (1998) logical criteria. Putnam (1993) made passing references to the importance of tolerance to the health of a democratic society but did not actually consider it social capital.

I was most interested in education as a factor in predicting dimensions of social capital, as Hanifan (1916), Bourdieu (1983), and Coleman (1988) have all stressed its importance primarily, and it was education that overall did the best job of prediction. It makes sense that this would be the case since education is an institution that facilitates and requires networking capabilities, time spent with others, and a relatively open mind to successfully navigate.

Future research on dimensions of social capital needs to further refine its parameters for how to define the latent dimensions so that it does not theoretically lump together questions from the GSS of seemingly similar nature, but empirically derives these dimensions from research. Perhaps a more qualitative approach would result in the emergence of new themes when comparing neighborhoods or communities that seem to be functioning well and have better established networks with those that do not. One recent study by Kondo and Khan (2011) explores the "institutional exposure hypothesis," the hypothesis that "...spatial exposure to cultural institutions creates capacities for neighborhoods and their residents. While all neighborhoods have culture, when institutionalized, such culture generates additional cognitive and social benefits" (p. 66). It is possible that since education is an institution of networking, resource exchange, and information flow, more education facilitates social capital, and that other

community institutions could do so as well. Things like museums, scientific events or shows, festivals, art shows, live theatre, and maybe even weekly farmers markets contribute to this sense of networking, setting norms of intellectual and communal values, and molding the social identity of cities. Putnam (1995) might not have been too far off when he hypothesized about institutions like the Elk's or Rotary clubs facilitating social identity and togetherness, but his scope of groups was not up-to-date and their function did not necessarily promote cognitive and social well-being through norming. Park's (2006) "coffeeing together" hypothesis also comes close to matching up an institution with social capital benefits but with the numbers of Starbucks coffee shops totaling "nearly 18,000" (Starbucks Company Profile 2012), one would surmise that if this hypothesis was valid, social capital surely would have increased. Comparing dimensional means from Park's (2006) study to this one shows decreases in both types of trust, while tolerance remained stable, and connectedness rose. It is highly unlikely that these trends can be accounted for by Starbucks.

APPENDIX A: TABLE 1. DESCRIPTIVE STATISTICS

Table 1. Means, Standard Deviations, and Proportions for Education, Religiosity, and Socio-demographic Variables

	General Trust Model		Institutional Trust Model		Tolerance Model		Connectedness Model	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
GENTRUST Index (range 3 – 9)	5.92	2.19	--	--	--	--	--	--
INSTRST Index (range 6 – 18)	--	--	10.92	2.42	--	--	--	--
TOL Index (range 0 – 3)	--	--	--	--	2.51	.93	--	--
CONNECT Index (range 0 – 24)	--	--	--	--	--	--	14.80	4.32
Educational Attainment	13.36	3.10	13.45	3.07	13.57	3.10	13.36	3.11
Age	48.00	17.91	47.84	17.90	47.84	16.96	48.28	17.73
Household Income	16.40	5.62	16.51	5.55	16.49	5.68	16.41	5.62
Divorced Respondents	.21	--	.20	--	.21	--	.19	--
Single Respondents	.27	--	.28	--	.26	--	.29	--
Female Respondents	.57	--	.57	--	.54	--	.58	--
African American Respondents	.16	--	.16	--	.15	--	.17	--
Hispanic Respondents	.12	--	.12	--	.12	--	.12	--
Religiosity	2.57	.96	2.57	.97	2.57	.97	2.59	.98

APPENDIX B: TABLE 2. MULTIPLE REGRESSION RESULTS

Table 2. Multiple Regression Results: Effects of Socio-demographic Variables on Dimensions of Social Capital

Independent Variables	General Trust Model	Institutional Trust Model	Tolerance Model	Connectedness Model
Educational Attainment in Years	.193/ .274** (.020)	-.014/-.017 (.025)	.073/ .242** (.009)	.188/ .136** (.040)
Age	.029/ .242** (.004)	-.004/-.032 (.004)	-.013/-.232** (.002)	-.050/-.207** (.007)
Household Income	.032/ .083** (.011)	-.020/-.046 (.014)	.008/ .050 (.005)	.000/0.00 (.023)
Divorced Respondents	-.213/-.040 (.146)	-.155/-.026 (.181)	.143/ .062* (.067)	-.010/ -.001 (.302)
Single Respondents	.088/ .018 (.159)	.397/ .073* (.194)	-.108/-.050 (.072)	1.414/ .148** (.324)
Female Respondents	-.026/-.006 (.112)	.310/ .064* (.137)	.187/ .100** (.051)	-.609/ -.070* (.228)
African American Respondents	-.888/-.148** (.160)	.892/ .134** (.197)	-.150/-.058* (.074)	-.015/ -.001 (.318)
Hispanic Respondents	-.314/-.046** (.183)	1.042/ .139** (.227)	-.049/-.017 (.084)	-1.167/-.089** (.357)
Religiosity	-.044/-.020 (.059)	.240/ .096** (.072)	-.129/-.133** (.027)	-.064/-.014 (.119)
Intercept	1.709	10.513	2.251	14.973
N	1288	1212	1168	1350
R <sup>2</sup>	.208	.080	.174	.131

Note: Cell entries are given as unstandardized regression coefficient/standardized (beta) coefficient with the standard error given in parentheses.

\* p < .05, \*\* p < .01

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