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Integrating “standard” residents into “non-standard” communities: a longitudinal analysis of social capital in a new urbanist development

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ABSTRACT

This article examines how levels of social capital in a new urbanist community change over time. We collected demographic and social capital data in a new urbanist community in 2001 and then again in 2010. The findings indicate that this community experienced an overall decline in social capital over this nine-year period. Additionally, we found that while residents new to the community were less concerned with social capital than long-term residents in the community, the latter group had also declined significantly in their levels of social capital. Overall, the results suggest that planners of new urbanist and other intentional communities should consider the impact of changing demographics when designing new subdivisions. Most importantly, residents and community leaders need to consider alternative means by which social capital can be retained as new residents are integrated into established communities.

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Introduction

The past several decades have witnessed a backlash against suburban development. It has been argued that standard suburban design – specifically suburban sprawl and automobile-centric planning – has attenuated our social connections, increased social isolation, and led to an overall decline in community social capital (Dunham-Jones and Williamson 2009; Fischer 1982; Freeman 2001; McPherson, Smith-Lovin, and Brashears 2006; Putnam 2000). Many analysts have proposed new urbanism, a planning philosophy, as a solution to the social and environmental problems created by suburban development. Cross-sectional studies have found that living in new urbanist or traditional subdivisions compared to standard suburban subdivisions is associated with a variety of positive social outcomes (Brown and Cropper 2001; Cabrera 2013; Cabrera and Najarian 2013, 2015; Kim and Kaplan 2004; Lund 2002, 2003; Nasar 1997; Plas and Lewis 1996; Podobnik 2002). However, very few studies have examined social capital changes within a single community over time (for an exception, see Podobnik 2011). This article uses a longitudinal study to examine how a new urbanist development changes over time, especially in regard to levels of social capital. We address the following research questions: (1) Do residents become more socially connected over time, or less? (2) Are newer residents different from long-term residents?

(3) Do the newer residents get along with the long-term residents? While this study focuses on a new urbanist community, it should be noted that the questions and findings of this article are likely to be applicable to other forms of intentional communities as well.

Social capital

Bourdieu (1986, p. 248) conceptualized social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition”. According to Bourdieu, social capital is a resource that can be leveraged by individuals only through their networked relationships and interactions with the group. Similarly, Coleman (1988, 1990) defined social capital as “a variety of different entities having two characteristics in common: they all consist of some aspect of social structure, and they facilitate certain actions of individuals who are within the structure” (Coleman 1990, 302). While usually beneficial at an individual level, Coleman and Bourdieu conceived of social capital as a resource that is value-neutral at the collective level, with the ability to produce both harm and good in society at large. More recently, Putnam (2007, p.137) proposed his “lean and mean” definition of social capital: “social networks and the associated norms of reciprocity and trustworthiness”. Putnam’s definition is more a measure of the by-products of the social networks described by Bourdieu and Coleman. Nevertheless, social capital researchers often prefer Putnam’s definition, as it is easier to understand and operationalize. Despite these differences, all of these definitions of social capital share the common assumption that social networks have the potential to provide tangible benefits to those who possess them.

Other researchers contend that social capital consists of separate dimensions (Bursik 1999; Sampson 2012; Sampson and Graif 2009; Woolcock 1998). Sampson and Graif (2009) theorized that residential social capital consists of four dimensions – collective efficacy, local networks, organizational involvement, and conduct norms – with an additional two dimensions at the community leadership level: positional contacts and organizational involvement. Sampson and Graif formulated a number of important principles based on this work. First, the existence of one form of social capital (residential or leadership) does not imply the existence of other forms of social capital. Second, high levels of network connectivity, involvement, and norm creation often lead to lower levels of collective efficacy within a community. The latter suggests that to increase collective efficacy, improvements in standard types of social capital (e.g., networks, trust, norms of reciprocity) may not be sufficient. Sampson and Graif’s work demonstrates that social capital is often more nuanced than assumed, and that specification of the desired outcomes is essential when undertaking projects that promote social capital.

Wood and Giles-Corti (2008) proposed a model that relates social capital to the built environment. At the meso-level, their model proposes a link between walkability (i.e., designs that promote safer and more aesthetically pleasing walking routes) and neighboring activities (i.e., interacting socially, participating in groups and activities, and forming social support groups). It is proposed that these interactions will then produce social capital in the community in terms of trust, reciprocity, civic engagement, community concern, networks, friendliness, and support. Note that social capital, once developed, further impacts neighborhood attributes (i.e., interaction opportunities), which in turn affect social capital, in a positive feedback loop.

Similarly to Wood and Giles-Corti, Talen (1999) argues that those wishing to examine the relationship between the built environment and social capital should focus on the mechanisms that are directly attributable to the built environment (i.e., interaction opportunities) rather than focusing on higher-level outcomes, which are only indirectly related to the built environment. We opt to employ Putnam’s (2000) measures of social capital (rather than the interaction-opportunities metrics suggested by Talen and Wood and Giles-Corti), as this study focuses on macro-level differences between communities and not the more nuanced micro-processes that directly relate social capital to the built environment.

New urbanism design principles

The concept of new urbanism first gained attention in 1981 after the town of Seaside, Florida, was built by husband-and-wife architects Andres Duany and Elizabeth Platter-Zyberk. In 1993, after new urbanism had gained considerable momentum, seven architects and planners (Peter Calthorpe, Andres Duany, Elizabeth Platter-Zyberk, Elizabeth Moule, Stefanos Polyzoides, Dan Solomon, and Peter Katz) founded the Congress for the new urbanism (Leccese and McCormick 2000). By 1996, its first charter was ratified (see Talen 2002 for an explanation of how the charter relates to community development). Since then, new urbanism has gained national attention. By 2010, over 325 new urbanist communities had been built in the United States (Talen 2010), and today an astounding 4000 new urbanist-inspired projects are planned or under construction (listed at NewUrbanism.org as of 29 January 2015). Principles of new urbanism have also been used in creating public standards for community design, including the LEED-ND (Leadership in Energy and Environmental Design – Neighborhood Development) certification and the US government-backed HOPE VI inner-city revitalization program (Friedman 2007). It should be noted that two of the original founders of new urbanism, Andres Duany and Stefanos Polyzoides, were involved in the 1996 design charrette phase of Civano, the new urbanist subdivision examined in this study (Nichols and Laros 2010).

Much of the appeal of new urbanism has been driven by the promise to ameliorate the harmful effects of suburban sprawl. New urbanists have pointed out that sprawl tends to isolate people and inhibit the formation of social ties. In response, new urbanists hope to increase social interaction through their designs (Bressi 1994; Calthorpe 1994; Duany and Platter-Zyberk 1994; Duany, Platter-Zyberk, and Speck 2000; Moule and Polyzoides 1994). Some of these include: building front porches to provide a semi-public space for interaction; placing houses closer to the street to promote communication between sidewalk and residence; creating safe pedestrian environments to encourage walking; and building more densely packed mixed-use neighborhoods that reduce automobile dependence and encourage walking (Bressi 1994; Calthorpe 1994; Duany and Platter-Zyberk 1994; Duany, Platter-Zyberk, and Speck 2000). While many new urbanists are proponents of community development, it should be noted that the majority still focus primarily on environmental and sustainability issues.

A number of criticisms have been levied against new urbanism. Audirac (1999), in a study examining personal preferences, found that respondents preferred the standard suburban form three to one over new urbanist-type designs. Day (2003) found that some new urbanist design features might not translate well to diverse communities. Lee and Ahn (2003) argued that new urbanist communities have done a poor job of dealing with conflicts between drivers and pedestrians. Cozens and Hillier (2008) found that the social permeability espoused by new urbanist designs might promote, rather than reduce, crime. Finally, a number of researchers have written about the challenges of studying new urbanism, especially in relation to its social goals (Sander 2002; Talen 1999).

How does social capital in new urbanist communities change over time?

To date few articles have examined how social capital changes in a new urbanist community over time. One such study, by Podobnik (2011), examined Orenco Station, a well-regarded new urbanist community in Portland, Oregon, in 2002 and then again in 2007. While the longitudinal study showed an overall decline in a community-comparison measure and no change in terms of friendliness of neighbors, it revealed substantial increases in neighborhood group participation, new types of neighborhood interaction, and walking to shops. Overall, this study produced mixed results, as some indicators of social capital seemed to increase over the study period while others either stayed the same or declined.

A number of studies have examined, using cross-sectional data, how residential tenure affects social capital. Both McCulloch (2003) and Leyden (2003) found positive relationships between social capital and length of residence in a new urbanist community. Similarly, other studies have shown a positive relationship between residential tenure and a number of social capital indicators, including neighboring behaviors (Wilkerson et al. 2012), social connections (Ziersch et al. 2005), knowing neighbors (Leyden

2003), and supportive acts of neighboring (Lund 2003). However, another set of studies have failed to find statistically significant relationships between residential tenure and sense of community (Wood, Frank, and Giles-Corti 2010), unplanned interactions (Lund 2003), social connections (Lund 2003), trust (Leyden 2003; Ziersch et al. 2005), and feelings of safety (Ziersch et al. 2005). Additionally, one study found a negative relationship between residential tenure and reciprocity (Ziersch et al. 2005). Overall, the findings relating residential tenure and social capital are mixed. Similar numbers of studies have indicated positive relationships with social capital and no relationship, while one study indicated a negative relationship. Based on this inconclusive evidence, one must assume that more data are needed for a better understanding of how social capital changes over time in new urbanist or traditional communities.

Methods

The population under consideration in this study consists of the same community examined at two points in time. This community, a subdivision called Civano in Tucson, Arizona, was first surveyed in 2001. It was then surveyed again in 2010, almost 10 years later. The community was built as a sustainable development project, using green building techniques, and contains new urbanist design strategies such as back-loaded garages, a winding permeable street pattern, mixed housing, porches, a local school, and mixed-use zoning in a centralized location. Like other new urbanist communities, the density in Civano is higher than in a standard suburban subdivision. In 2001 the community was new, and populated by a group that we refer to as Pioneers, the residents who were the first to live in this particular subdivision.

Data for the first phase of the study were collected between February and April 2001 via face-to-face interviews. The questions, based on a condensed version of Putnam's Social Capital Benchmark Survey (Gallup Organization 2000), solicited answers to various items designed to measure social capital, including respondents' reports of frequency of social interactions, number of social connections, and subjective sense of community. To measure change over time, the same survey questions were also used in Phase 2 of the study, although some additional questions were added to this survey for the purposes of a separate study (Cabrera 2013; Cabrera and Najarian 2013, 2015). In 2001 the community consisted of 91 households, 65 of which were randomly selected to participate in the survey. A total of 37 out of 61 households completed the survey, for a response rate of 60.7%. The final subject pool was 61 rather than 65 because four residences selected in the final pool were vacant.

Data for the second phase of the study were collected between December 2009 and April 2010 via an online survey. In 2010 the community had grown to 539 households, 200 of which were randomly selected to participate in the study. A letter was mailed to each potential subject asking him or her to participate in the study. Up to three letters were mailed to each potential subject. A total of 91 out of 193 households completed the survey, for a response rate of 47.2%. The final subject pool was 193 rather than 200 because seven residences selected in the final pool were vacant. Of the 200 residents asked to participate in the 2010 survey, 130 were also asked to complete a number of open-ended questions regarding their sentiments toward the community (see the Qualitative Data section for details). Of these 130 selected residents, 56 completed the open-ended questions, for a response rate of 45.5%.

While there was a significant difference between the sample sizes in 2001 and 2010, note that the 2001 sample of 37 respondents was actually a higher proportion of the entire population ($37/91 = 0.41$) than the 2010 sample ($91/539 = 0.17$). Because of the small size of the population in 2001, a larger percentage of the population was sampled to ensure statistical validity.

An examination of demographic changes between the Civano population in 2001 and 2010 showed few differences (Table 1). Respondents in 2001 and 2010 were statistically similar in terms of sex, ideology, proportion with children under 18 living at home, proportion non-white, and income. However, the 2010 respondents had (naturally) been living in the community longer; they were also on average 4.6 years older, and had an average of 1.5 more years of education. In subsequent regression analyses, those variables that were statistically different between the two populations were used as control

Table 1. Demographic comparison: Civano 2001 and Civano 2010.

	Civano 2001	Civano 2010
Sample Size	37	91
Study Year	2001	2010
Female (%)	56.8	60.4
Years in residence (years)	0.8	4.8**
Year moved to community	1999-2001	1999-2010
Ideology ^a	3.6	3.6
Children under 18 at home (%)	35.1	33.7
Age (years)	46.5	52.0*
Education (years)	15.6	17.1**
Non-White (%)	6.1	3.4
Income (\$) ^b	77,844	77,736

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aVery conservative = 1, conservative = 2, middle-of-the-road = 3, liberal = 4, very liberal = 5; ^bCivano 2001 Income has been adjusted for inflation to 2010 dollars.

variables: age and education. (Years in residence was not included as a control variable as it had collinearity issues with the dummy variable in the regressions which also measured differences in time.)

Demographic and background variables

The survey collected information on a number of background characteristics, including gender, age, ethnoracial identity, educational attainment, employment status, typical number of work hours, political orientation, religious identification, children under 18 living at home, and income. Political orientation was measured using the question, "Thinking politically and socially, how would you describe your own general outlook – as being (1) very conservative, (2) moderately conservative, (3) middle-of-the-road, (4) moderately liberal, or (5) very liberal?"

Independent variables

The independent variables for the study included three dichotomous variables for specific types of residents. The Pioneers were original residents, surveyed in 2001, who had been living in the subdivision 0–3 years; the Longtimers were also early residents, but surveyed in 2010, having lived there 6–10 years; and the Newcomers were more recent residents, surveyed in 2010, who had been living there 0–5 years.

Dependent (social capital) variables

The dependent variables for the study included seven different dimensions of social capital: number of close friends; number of confidants (people with whom you can share confidences or discuss a difficult decision); frequency of interaction with immediate neighbors (10–20 closest households); frequency of cooperation with immediate neighbors to fix or improve something (dichotomous); level of trust in neighbors; expectation of living in the community five years on; and the respondent's rating of their community as a place to live. All of these were derived from Robert Putnam's Social Capital Benchmark Survey (Gallup Organization 2000).

Qualitative data

In addition to quantitative data, three open-ended questions were used to examine the sentiments of respondents at the time of the 2010 survey: "Did your community meet your expectations?"; "If you could, is there anything you would change about your community?"; and "Is there anything about your community that you feel prevents more social interaction between neighbors from occurring?"

Qualitative data were used to supplement quantitative data and to gain insight into potential mechanisms that might account for social capital changes over time.

Data and results

The findings for this study are detailed in three analyses: first, a comparative analysis of the social capital differences between Civano in 2001 and Civano in 2010; second, an analysis of the differences between Pioneers, Longtimers, and Newcomers and how these differences can explain social capital changes between 2001 and 2010; and lastly, an analysis of qualitative data, to gain a better understanding of the behavioral processes involved in the observed changes in social capital.

Social capital changes over time

First, the study examined whether social capital in Civano had changed between 2001 and 2010. Mean differences in social capital indicators over time (Table 2a) reveal that there has been a decline in every social capital indicator since 2001. Respondents in 2010 had fewer friends, fewer confidants, fewer neighbor interactions, less trust in their neighbors, and a lower rating of their community. Most striking, respondents were less likely to cooperate with their neighbors to fix or improve something (by 19 percentage points), and a smaller proportion of respondents reported wanting to stay in the neighborhood (74% in 2010, versus 84% in 2001). Multivariate analysis indicates that five of the seven social capital measures had statistically significant declines between 2001 and 2010, adjusting for basic socio-demographic variables, with the exceptions being desire to stay and community rating (Table 2b).

Why has social capital declined over time?

To understand why there had been a decline in social capital in this community over the nine years of the study period, we examined differences between respondents from the original survey in 2001 (Pioneers), respondents in 2010 who had been long-time residents of the community (Longtimers), and respondents in 2010 who were newer to the community (Newcomers). The following analyses seek to discover whether the decline in social capital in Civano is due to self-selection of Newcomers who

Table 2a. Social capital comparison: Civano 2001 vs. Civano 2010.

	Civano 2001	Civano 2010	Difference (2001-2010)
Number of friends	5.6	5.3	-0.3
Number of confidants	3.6	3.3	-0.3
Neighbor interactions	6.2	5.6	-0.6
Cooperate with neighbors (%)	62.2	42.3	-19.9
Trust in neighbors	2.8	2.4	-0.4
Desire to stay (%)	83.8	74.2	-9.6
Rating of community	3.7	3.5	-0.2

Table 2b. Social capital regression: Civano 2001 vs. Civano 2010.

	Friends	Confidants	Interactions	Cooperation	Trust	Desire to stay	Community rating
Civano 2010 ^a	-0.67*	-0.41*	-0.76**	-0.23*	-0.44*	-0.09	0.14
Age	0.03 [†]	0.01*	0.01*	0.00 [†]	0.01	0.00	0.00
Education	0.15	0.04	0.06*	0.01	0.03	-0.01	-0.02
Constant	1.63	2.49**	4.74**	0.32	2.01**	0.88**	3.92**
R ²	0.04	0.06	0.14	0.04	0.10	0.02	0.02
N	128	128	128	128	128	128	128

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aCompared to base category (Civano 2001).

inherently have lower levels of social capital, a decline in social capital among long-time residents, or something else.

Demographic comparison indicates few demographic differences between the three populations, with the exception of years in residence, age, and education (Table 3). As a result, both age and education were again used as control variables in regression analyses comparing these three subpopulations.

There was a negative relationship for all social capital variables between Pioneers and Newcomers, indicating that Newcomers had lower scores on all social capital indicators. Four of these differences were statistically significant. Specifically, Newcomers had fewer confidants in the community, interacted less with their neighbors, were less likely to cooperate with neighbors to fix or improve something, and had less trust in their neighbors than Pioneers (Table 4). These results indicate that residents newer to the community had substantially lower levels of social integration with extant community residents than those who had lived in the community since the beginning.

When comparing Pioneers to Longtimers (i.e. examining the change in Pioneers' social capital over time), the results indicated that levels of social capital had decreased over the duration of the study, with Longtimers displaying significantly lower levels of social capital in three of the social indicators in comparison to Pioneers (Table 5a). Specifically, Longtimers had fewer confidants, fewer interactions with neighbors, and less trust in their neighbors than Pioneers. These findings suggest that from 2001 to 2010, the levels of social capital of early adopters of the community had also declined.

Because Longtimers and Pioneers did not overlap exactly in their move-in dates (1999–2001 and 1999–2004, respectively), we specified a regression model examining the social capital differences between Pioneers and only those Longtimers who had moved into the community between 1999 and 2001 (Early Longtimers). The analysis revealed similar findings when comparing Longtimers or Early Longtimers and Pioneers, with the exception that Early Longtimers appeared to have had an even sharper drop in social capital than Longtimers as a whole (Table 5b).

Table 3. Demographic comparison: Pioneers, Longtimers, and Newcomers.

	Pioneer	Longtimer	Newcomer	P-L	P-N	L-N
Sample size	37	36	55			
Study year	2001	2010	2010			
Female (%)	56.8	55.6	63.6			
Years in residence	0.8	8.1	2.6	**	**	**
Year moved to community	1999–2001	1999–2004	2005–2010			
Ideology ^a	3.6	3.6	3.7			
Children under 18 at home (%)	35.1	29.4	36.4			
Age (years)	46.5	56.4	49.2	**		*
Education (years)	15.6	17.3	17.1	*	*	
Non-white (%)	6.1	0.0	5.8			
Income (\$) ^b	77,844	78,482	77,283			

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aVery conservative = 1, conservative = 2, middle-of-the-road = 3, liberal = 4, very liberal = 5; ^bCivano 2001 Income has been adjusted for inflation to 2010 dollars.

Table 4. Social capital regression: Pioneers versus Newcomers.

	Friends	Confidants	Interactions	Cooperation	Trust	Desire to stay	Community rating
Newcomer ^a	-0.47	-0.35 [†]	-0.77**	-0.27*	-0.41	-0.07	-0.09
Age	0.05 [†]	0.02*	0.01*	-0.00	0.01**	0.00	0.00
Education	0.08	0.02	0.06 [†]	0.02	0.03	-0.01	-0.00
Constant	2.27	2.61**	4.69**	0.38	1.88**	0.86**	3.71**
R ²	0.05	0.09	0.14	0.07	0.13	0.02	0.01
N	92	92	92	92	92	92	92

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aCompared to base category (Pioneer).

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Table 5a. Social capital regression: Pioneers vs. Longtimers.

	Friends	Confidants	Interactions	Cooperation	Trust	Desire to stay	Community rating
Longtimer ^a	-1.09	-0.45 [†]	-0.76**	-0.20	-0.50**	-0.14	-0.25
Age	0.04	0.01	0.01	0.00	0.01	0.00	0.00
Education	0.26*	0.05	0.09*	0.02	0.04 [†]	0.01	-0.02
Constant	-0.27	2.44**	4.52**	0.17	1.84**	0.68*	3.86**
R ²	0.07	0.06	0.16	0.04	0.16	0.04	0.01
N	73	73	73	73	73	73	73

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aCompared to base category (Pioneer).

Table 5b. Social capital regression: Pioneers vs. Early Longtimers.

	Friends	Confidants	Interactions	Cooperation	Trust	Desire to stay	Community rating
Early_Longtimer ^a	-0.24	-0.55 [†]	-0.60*	-0.14	-0.54**	-0.20 [†]	-0.50 [†]
Age	0.05	0.01	0.00	0.00	0.01*	0.00	0.01
Education	0.26	0.04	0.13**	0.05	0.05*	0.02	-0.04
Constant	-0.50	2.47**	4.11**	-0.10	1.50**	0.63 [†]	3.85**
R ²	0.08	0.07	0.16	0.07	0.21	0.11	0.11
N	55	55	55	55	55	55	55

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aCompared to base category (Pioneer).

No statistically significant social capital differences were found between Longtimers and Newcomers (Table 6). This suggests that levels of social capital of early adopters of the community had dropped from well above, to somewhere equal to, those of Newcomers.

An in-depth analysis of respondent answers to three social capital indicators further illustrates this decline in social capital from 2001 to 2010 in long-time residents (Table 7). To the question, "First, think about people in your neighborhood, generally speaking, would you say that you can trust them a lot, some, only a little, or not at all?" 75% of the early adopters in 2001 of the community answered "a lot". By 2010, in a similar cohort who were now long-time residents of the community, only 45.7% gave this answer, a decline of almost 30 percentage points. Likewise, from 2001 to 2010 long-time residents of the community had similar drops in their expectation of living in the community five years later (20 percentage points drop), and their rating of their community as an excellent place to live (20 percentage points drop). These results point to a substantial decline across multiple indicators of social capital in long-time residents of the community over the nine-year span. The analysis that follows analyzes qualitative responses to open-ended items to discern the possible mechanisms that might account for this sizeable drop in social capital.

Qualitative responses were based on open-ended responses to three questions: "Did your community meet your expectations?"; "If you could, is there anything you would change about your community?";

Table 6. Social capital regression: Newcomers vs. Longtimers.

	Friends	Confidants	Interactions	Cooperation	Trust	Desire to stay	Community rating
Longtimer ^a	-0.26	-0.08	0.00	0.09	-0.08	-0.80	-0.17
Age	0.03	0.01	0.01*	0.00	0.01	0.00	0.00
Education	0.13	0.05	0.03	0.00	0.02	-0.03	-0.02
Constant	1.83	1.97**	4.32**	0.34	1.82**	1.02*	3.88**
R ²	0.03	0.04	0.05	0.01	0.02	0.07	0.02
N	91	91	91	91	91	91	91

Notes: [†] $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; ^aCompared to base category (Newcomer).

Table 7. Social capital indicators: trust, desire to stay, rating of community.

	Pioneer	Longtimer	Newcomer
<i>How much do you trust your neighbors?</i>			
A lot (%)	75.0	45.7	50.0
Some (%)	25.0	45.7	42.6
Only a little (%)	0.0	8.6	5.6
<i>Expect to be living in community in five years?</i>			
Yes (%)	78.4	58.3	69.1
Don't know (%)	10.8	25.0	14.6
No (%)	10.8	16.7	16.4
<i>Rating of community as a place to live</i>			
Excellent (%)	75.7	55.6	67.3
Good (%)	18.9	36.1	25.5
Fair (%)	2.7	2.8	5.5
Poor (%)	2.7	5.6	1.8

and “Is there anything about your community that you feel prevents more social interaction between neighbors from occurring?” A number of Longtimers made comments indicating that Newcomers were to blame for the decline of social capital in the community. One Longtimer stated, “More recent residents do not appear to understand or appreciate the basic philosophy of the community, but rather see it as another suburban neighborhood.” Another Longtimer asserted, “For people who were not here from the start or who were just looking for a house, not a community, I wish they would give involvement a try. Everyone has something to offer and receive.” These comments suggest that long-time residents of the community felt that Newcomers were looking for something similar to a standard suburban subdivision and seemed unwilling to get on board with the social goals of the new urbanist development.

On the other hand, a number of sentiments by Newcomers also suggested that Longtimers were not necessarily accepting of them. Newcomers made remarks such as “Civano has its share of people that are hateful against anyone that doesn’t agree with them”; “the people tend to be a little cliquish, and noninclusive”; and “neighbors are more rigid/judgmental than hoped”. These comments suggest that Newcomers are not the only ones to blame for the decline in social capital, but that Longtimers’ lack of acceptance may also be contributing to declining social capital in the community.

Overall, the qualitative data suggest two possible explanations for declining social capital in Civano from 2001 to 2010. First, Longtimers suggested that Newcomers differed in significant ways from themselves and that the presence of these less community-minded residents changed the nature of the community for the worse. Second, Newcomers suggested that Longtimers hampered the creation of social capital through their lack of understanding and acceptance of new residents moving into the community once it had been established.

Discussion

This study examined how social capital changes over time in a developing new urbanist community. The findings of a longitudinal study indicate that social capital declined substantially in the community over a nine-year period between 2001 and 2010. These results are not consistent with prior longitudinal research, which has found an increase in social capital over time in new urbanist communities (Podobnik 2011), nor are they consistent with cross-sectional studies showing a positive relationship between social capital and residential tenure in traditional communities (Leyden 2003; Lund 2003; McCulloch 2003; Ziersch et al. 2005; Wilkerson et al. 2012). The findings indicate that the social capital declines in this community were at least partially due to two factors: a substantial deficit in the levels of social capital that new residents have, compared to early adopters of the community; and a substantial decline in levels of social capital displayed by long-time residents in comparison to the levels they exhibited upon first moving into the community. This latter result supports the research of Ziersch et al. (2005), who found a negative relationship between residential tenure and reciprocity. Qualitative

Table 8. Social capital differences: Civano 2001, Civano 2010, and Sierra Morrado.

	Civano 2001	Civano 2010	Sierra Morado ^a
Number of friends	5.6	5.3	4.3
Number of confidants	3.6	3.3	3.2
Neighbor interactions	6.2	5.6	5.4
Cooperate with neighbors (%)	62.2	42.3	16.7
Trust in neighbors	2.8	2.4	2.0
Desire to stay (%)	83.8	74.2	59.1
Rating of community	3.7	3.5	3.2

Note: ^aSierra Morado is a standard suburban subdivision located adjacent to Civano, also surveyed in 2010.

interviews reinforced the finding that social capital levels of newer residents were lower than those of early members of the community, reducing overall levels of social capital in the community as a whole. These data also indicate that attitudinal differences between earlier and later cohorts led to a decline in social capital for long-time residents. However, culpability for social capital declines did not appear to lie solely with newer residents. Qualitative interviews with newer residents suggest that they were not accepted into the community by long-term residents, an action that likely also led to the decline of social capital for all community members. An interesting caveat is that even after this decline in social capital, Civano still had more social capital than a nearby standard suburban subdivision (Table 8; see Cabrera 2013 for more information regarding differences between these two communities).

Limitations

This study has a number of limitations that need to be addressed. The first is a difference in data collection methods between Phase 1 (face-to-face) and Phase 2 (online) of the study. This difference in methods was due to financial constraints during Phase 2. While both methods used the same survey instrument, research suggests that the two styles of data collection may produce different responses. Duffy et al. (2005) noted three differences in responses between face-to-face and online data-collection methods: knowledge bias, social desirability bias, and question uncertainty. While the issue of knowledge bias was less likely to affect this study, as the survey questions were related more to subjective than objective responses, the other two differences had the potential to lead to bias. Face-to-face respondents are more susceptible to social desirability bias. While the interviewers were trained in proper interviewing techniques and knew of the risks of social desirability bias, it is possible that such a bias is present in the 2001 data collected via face-to-face interviews. Such a bias could perhaps have inflated social capital measures in the 2001 sample. However, the overall magnitude of the social capital differences between 2001 and 2010 suggests that such a social desirability bias would have to be extreme to account for all of the social capital differences seen in the community over time. Duffy et al. (2005) also suggest that respondents in online surveys may be less likely to understand questions, which is seen in the form of more don't-know answers. This potential bias was tested directly. Looking at all quantitative responses in which a don't-know answer was possible, 1.39% of face-to-face responses were don't-know, versus 2.55% of online responses; this difference is not statistically significant.

Additional limitations of the study concern other factors that cannot be ruled out as having an effect on social capital during the time period of the study, including the emergence of social media, the Great Recession, and perceived crowding. The widespread adoption of social media like Facebook and Twitter could have changed the behavior of people in such a way as to be detrimental to community-level social capital. Similarly, the fact that the neighborhood had grown from 91 to 539 residents during the time of the study could in itself have resulted in declines in social capital due to perceived crowding, or the greater challenge of creating a cohesive community with so many residents. The Great Recession of 2008–2009 could have had a detrimental effect on social capital in a number of ways. It could simply be that social capital declined as the general mood of the nation soured due to the economic recession. Additionally, the Great Recession may have changed people's home-buying strategies; whereas

previously people might have sought neighborhoods for social and other reasons, the recession might have created a sense that they should primarily be concerned with finding neighborhoods that are financially stable and a solid investment.

While there was unfortunately no control in this study (such as a standard suburban subdivision measured at the same points in time) that could be used to rule out these potential alternative causes of declining social capital, the qualitative results do reduce the likelihood of these alternative explanations. If social media, the great recession, or crowding were indeed the cause of declines in social capital between these two points in time, it is likely that the open-ended qualitative responses would have hinted at them. But in fact, not a single resident, Longtimer or Newcomer, cited social media, the Great Recession, crowding, or any other factor – with the exception of attitudinal differences regarding social capital – as a perceived reason for declines in social capital. While the qualitative responses do not completely rule out such alternatives, they do make them less likely.

Conclusion

This study points to an important challenge for any ideologically driven subdivision (i.e., one motivated by ideals such as social capital, sustainability, co-housing, etc.): the impact of changing community-resident demographics over time. Early adopters of these types of subdivisions are likely to be more invested in the major goals and ideals of their community than later arrivals. Ideologically motivated subdivisions, such as Civano, that are initially successful in creating thriving communities often end up with higher market valuations than their standard suburban counterparts (Song and Knaap 2003, 2004). Consequently, they have to contend with less ideologically committed residents moving into their communities who are not looking for social capital or sustainability, but for a desirable neighborhood that will maintain high property values. This leads to the question, “How does one integrate ‘standard’ residents into ‘non-standard’ communities?” Generally, it seems that solutions to this question must rely either on successfully integrating newer, less homogeneous residents into the community, or on finding ways to only recruit suitable similar residents. The former solution is the only reasonable one in an open society. Therefore, future research is needed to better understand how diverse newcomers can be effectively integrated into successful alternative communities without fraying the strong social fabric that makes those communities a success in the first place (for prior research illustrating the difficulty of integrating diverse residents into a community see Talen 1999; Day 2003; Grant and Perrott 2009; Cabrera and Najarian 2013).

However, the responsibility for sustained community cohesion is another question entirely. While new urbanist and other intentional community designers interested in creating social capital certainly have a responsibility to design communities with this potential, it is unrealistic to assume that they also have the long-term responsibility to ensure that social capital is maintained over time. While the built environment can lay a strong foundation that inspires social interaction and human connection (i.e., affordances), it is up to community leaders and residents to maintain the social fabric of the community through other means, such as community programming. Community programming could include social gatherings such as festivals, farmers’ markets, or music-in-the-park events. Neighborhood groups could be formed, such as book and garden clubs. Educational programs that promote the use of the social capital features of the community (such as neighborhood shopping areas, community gathering spaces, and even front porches) may also be helpful.

It also is possible to envision a type of built environment design that is modifiable and adaptable to the changing needs of the community and its residents, especially as communities grow in size and change in character over time. Multipurpose community rooms, community gathering places, and multi-use commercial areas are examples of this flexible approach. Additionally, designs that appeal to different types of residents could be employed. Future research could examine how spaces are actually utilized and identify those that are most widely used so they can be promoted to further increase social interaction.

Future studies that attempt to gauge how demographic and attitudinal changes over time affect social capital outcomes could do this in a number of ways. Researchers can examine how different types of groups work to facilitate social capital, including how they interact with the built environment. Additionally, a comparative analysis could be employed to examine differences between standard suburban subdivisions and new urbanist subdivisions (or other intentional communities), to test for differences in the ways they deal with changing demographics. Incorporating a standard suburban subdivision into the study could also act as a control case, which would address a number of limitations of single-case designs. Future studies could also expand their focus beyond the built environment and examine which types of community programming are most successful at stimulating social capital in the face of changing demographics.

Disclosure statement

No potential conflict of interest was reported by the authors.

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