SOCIAL NETWORKS, GEOGRAPHY, AND NEIGHBOURHOOD EFFECTS

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THIS ARTICLE IS TO APPEAR IN THE
ENCYCLOPEDIA OF SOCIAL NETWORKS

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It is through personal networks that society is structured and the individuals integrated into society. … daily life proceeds through personal ties: workers recruit in-laws and cousins for jobs on a new construction site; parents choose their children’s pediatricians on the basis of personal recommendation; and investors get tips from their tennis partners. … The interactions among the abstract parts of society – “the family”, “the economy”, and so on – usually turn out to be personal dealings between real individuals who know one another, turn out to be operations of personal networks. … All through life, the facts, fictions, and arguments we hear from kin and friends are the ones that influence our actions most. Reciprocally, most people affect their society only through personal influences on those around them. Those personal ties are also our greatest motives for action: to protect relatives, impress friends, gain the respect of colleagues, and simply enjoy companionship.

(Tilly, 1982: 3)

In one of social science’s classics, Festinger et al. (1950) showed a strong relationship between distance and social interaction. Social networks are spatially structured, as both cause and effect. In towns and cities, people congregate into residential areas to live among those they want to have social contact with, and to avoid others – as demonstrated by the increasing popularity of gated communities around the world (Atkinson and Blandy, 2006). Their social interactions are then structured within this patterning of residential choices, creating a geography of social networks. The existence of such a geography underpins much work across the social sciences: people create urban environments which structure their social lives (Michelson, 1970). But that geography is more often assumed than demonstrated, at least explicitly. Few geographers have explored the network geographies (early exemplars rarely followed up include Stutz, 1971; Wheeler and Stutz, 1971; Johnston, 1974), even though one of their discipline’s most innovative concepts – time geography (Hägerstrand, 1976, 1982, 1984) – provided an analytical framework. Instead they, like many other social scientists, have built models and analytical schemas on the assumption that social interaction is spatially structured, and interpreted observed behavioural patterns as evidence that this is so. Similarly, many studies that focus on social networks focus on
the interactions among members and their impacts, without paying great attention to their geography.

One area of research founded on the key assumptions that social interaction has a spatial architecture and that information flows through those geographically-structured spaces strongly influence attitudes and behaviour concerns neighbourhood effects. People talk to their neighbours and the outcome of their conversations may be changes in what they know and think about a subject – such as the candidates standing at a forthcoming election. The result may be a behavioural change – they vote for another candidate than the person initially preferred. A single conversation may be enough to change one’s mind in some cases; many may be needed in others. But the result is likely to be the same – a spatial polarisation of opinions as more people respond to the information reaching them through their neighbours and thus, in this case, a polarisation of voting patterns.

Knowing the geography of social networks – who talks to whom, and where – is thus key to appreciating how opinions are shaped and behavioural patterns formed. Building that knowledge base involves drawing together information from a range of studies – of network structures and geographies, information flows, attitude change and behavioural consequences. The following sections follow that sequence, focusing on neighbourhood effects in the geography of voting.

**RESIDENTIAL CHOICE AND NEIGHBOURHOOD EFFECTS**

The United States, according to Bishop (2008: 5), has recently developed a ‘stark geographical pattern of political belief, one that has grown more distinct in presidential elections since 1976. … [I]t has been sorting itself, sifting at the most microscopic levels of society, as people have packed children, CDs, and the family hound and moved’. The criteria people deploy in selecting new homes at the neighbourhood scale include making ‘choices about who their neighbors will be and who will share their new lives’ which, he contends, have political impacts. Thus at the county scale, whereas in 1976 less than one-quarter of all Americans lived in places where one candidate for the presidency won by a landslide, by 2004 the proportion was more than one-half. The country became spatially more polarized politically because in their migration patterns ‘people were creating new, more homogeneous relations’ (p. 6: though see Cain, 2009, on the scales of sorting and representation).

Those homogeneous neighbourhoods become self-perpetuating societal divisions: ‘The like-minded neighborhood supported the like-minded church, and both confirmed the image and beliefs of the tribe that lived and worshipped there’ (Bishop, 2008, 6). Other local institutions – schools, formal clubs and associations etc. – sustain and enhance these processes, as do informal interactions with neighbours. A greater homogeneity of ways of living shapes greater spatial polarization of political beliefs and voting patterns (Gimpel and Lay, 2005).

In the United Kingdom, too, Curtice and Steed (1982) noted growing spatial polarization of the electorate – later confirmed at a variety of scales (Johnston and Pattie, 2006). This was also – at least in part – associated with selective migration (although see Denver and Halfacree, 1992; McMahon et al., 1992). To others, a much more important influence has been the operation of contextual or neighbourhood
effects. The seminal work of Butler and Stokes (1969: 182) concluded that ‘once a partisan tendency becomes dominant in a local area processes of opinion formation will draw additional support to the party that is dominant’, and Miller (1977: 48) argued that:

… contact is a condition for consensus … social contacts are structured by family, choice of friends, social characteristics and locality. If party appeals to group interest or group attitudes evoke any differential political responses, the patterns of contact between individuals will tend to increase the political consensus within high-contact groups.

Indeed, locality proved a better predictor of how people voted than their social characteristics because ‘people who talk together vote together’ (Miller, 1977: 65). Others argued similarly, Andersen and Heath (2002: 126) contending that:

… we would expect to find tendencies towards class voting to be reinforced among voters who regularly associate with others from the same social class. On the other hand, we would expect to find the tendency towards class voting to be undermined among voters who frequently interact with people from other social classes since the interaction will tend to move them toward agreement with members of other social classes. Simply put, the more that people interact with members of other social classes, the weaker we expect class voting to be.

Many studies using aggregate (ecological) data have generated findings consistent with this hypothesis – that there is a greater spatial polarization of voting for a given party than there is of the social groups who tend to support that party. But almost all provide circumstantial evidence only; the patterns are consistent with the neighbourhood effect, but the processes are unobserved (Doreian, 2001).

Underpinning the argument for the neighbourhood effect is a series of propositions.

1. Locational decisions involve a considerable degree of social selection; people choose to live in residential neighbourhoods where people like themselves dominate.

2. The neighbourhood social networks that people join are thus dominated by people like themselves, not only in their individual characteristics but also their ideologies, attitudes and behaviour. Interaction with them sustains and may even strengthen their own positions; living among people who think and act like you can make it even more likely to that you will think and act accordingly.

3. Nevertheless, for a variety of reasons few local areas are entirely homogeneous. Some social contacts within the neighbourhood are thus likely to expose people to attitudes and behaviours different from their own. The majority locally will have less exposure to such ‘deviant’ tendencies than those in the minority will have to the majority’s norms, so it is more likely that the minority will be converted to the majority view – ‘conversion by conversation’ – than vice versa. The result will be the observed polarization.

These propositions in turn rest on a series of assumptions, the most important of which is that much social interaction takes place in localized social networks. Such networks are extremely unlikely to be isolated – many members will have links to either or both of other, non-local networks (based on workplaces or family/kin, for example) and separate networks in adjacent neighbourhoods. Such ‘external’ links (which may be weaker in intensity than the strong links within their core, localized
networks: Granovetter, 1973) are continual sources of new information, providing stimuli that in some cases generate altered attitudes and behaviour. The local social network is thus a structure not only within but also to and from which information (almost invariably interpreted information) flows. But relatively little is known about such flows: they are assumed to exist because observed patterns of behaviour are consistent with models and hypotheses predicated on their existence.

Such arguments apply to a much wider set of attitudes and behaviours than those associated with electoral decision-making. Just as political information flows through such networks so too does material linked to other types of behaviour – such as the adoption of innovations (see Mark, 1998, on musical preferences). Furthermore, such networks are also major conduits for other flows – infectious diseases, for example. Again, aggregate patterns are consistent with such models but the underlying processes – the actual flows along the network links – are often not revealed, with some exceptions (such as Rothenberg et al., 2005; Rothenberg, 2007).

In reviewing literature on the links between local social networks, information spread and attitudes/behaviour, therefore, we have to combine works directly addressing the hypotheses that social networks are geographically concentrated and that flows through those networks influence attitudes and behaviour with a wider set which identifies patterns consistent with those hypotheses but does not reveal the ongoing processes. Much of our attention focuses on political attitudes and voting behaviour as one example of such processes and patterns.

ON THE SPATIALITY OF SOCIAL NETWORKS

A core social science argument has identified a major difference between rural and urban areas in the nature of social interaction there; the former were characterized by *gemeinschaft* – or community – whereas the latter were characterized by *gesellschaft* – or association (Tönnies, 1887). Rural areas and relatively small settlements were assumed to display intense patterns of social contact in small, tightly-knit social networks, whereas urban areas were characterized by more diverse and transient contact patterns, with relatively few intense relationships, reflecting the fragmentation of such places (as with the spatial separation of home and workplace). Empirical research challenged this, however, identifying both communities exemplifying *gemeinschaft* within urban areas (especially working-class residential areas and minority immigrant enclaves) and also many ‘urban’ patterns of living spreading into rural areas, leading to the breaking down of well-established local communities. (The classic studies of the former include Gans, 1962, and of the latter Pahl, 1965; see also Dunbar, 2008.)

If we want, in Tilly’’s words, to ‘protect relatives, impress friends, gain the respect of colleagues, and simply enjoy companionship’ then we must interact with them – usually, though not necessarily, through face-to-face contact. As geographers have stressed since a pioneer established that theirs is a ‘discipline in distance’ (Watson, 1955; Johnston, 2003), most encounters, especially frequent encounters with kin, colleagues and friends, are spatially constrained, not least because of the time, cost and effort involved in overcoming the friction of distance: social worlds are geographically structured.
These contentions were substantially exemplified by research in a variety of Californian places (Tilly, 1982). Most respondents had social networks comprising 15-19 identified individuals; the largest group within those networks comprised kin (over 40 per cent of all those named), with work colleagues and neighbours each comprising a further 10 per cent. Non-kin, non-work associated neighbours did not dominate, therefore, but were a significant component of people’s contact circles. Nevertheless, local people – who could be in two or even all three of those categories – were a major component of the average social network: this comprised some 16 persons, of whom 5 lived within five minutes drive of the respondent’s home and a further 6 between 5-60 minutes drive away. And while there were differences between type of settlement (semi-rural, town, metropolitan, regional core) in the number of local (within a five-minute drive) kin named, there were few differences in the number of non-kin; respondents in each type of place had the same number (averaging c.3.6) living within 5 minutes drive of their home (i.e. neighbours, though not necessarily individuals commonly involved in chance meetings), although those living in the metropolitan area and its core named more people living further away (i.e. they had both larger and spatially more dispersed social networks than their rural counterparts). Overall, people from small towns were more involved with their fellow residents than those living in larger settlements and ‘urbanites [especially high income urbanites] substitute more distant relations for the foregone local ones’ (Tilly, 1982: 167): Tonnies’ binary split had not entirely dissipated.

Tilly (1982: 174-175) also found variations in the spatial boundedness of contacts according to their nature: the percentage that were with near-neighbours varied considerably depending on whether they were sociable (e.g. visiting and having dinner together) through discussing a hobby or personal issues, obtaining advice on important matters, and lending money and:

As one moves from exchanges for which distance is crucial to ones for which it is a marginal cost, from contacts requiring frequent physical presence to ones calling for occasional interactions possibly by telephone or mail, and from casual matters to critical matters, the advantage of close associates declines. For sociable interactions, distant associates were much less often cited than nearby ones. For discussion of hobbies, which often involves engaging in the hobby together, nearby associates were again more commonly cited, though not as much more. Physical presence promotes discussing personal matters, but it is not essential and the advantage of local associates is marginal. Giving advice on important decisions and lending money in an emergency can easily be done occasionally and at a distance, and there is no advantage to proximity.

If, therefore, much of the politically-relevant information flowing through social networks – much of which may be unstructured and unplanned – involves face-to-face interaction, neighbourhood circles are likely to be important.

This conclusion is sustained by Huckfeldt’s (1983) Detroit study. His respondents’ networks were very much structured by social class, and across all classes around 40 per cent had a majority of their friends drawn from within a 10-minute drive, with less than one-third having no friends within that radius. Local social context was an important influence on friendship choice, however; people living in areas where class dominated were more likely to have one or more friends drawn from that class, whatever their own class. Thus people in a minority in an area were likely to be
exposed to the majority view, which was likely to have the hypothesized effects on political attitudes. Huckfeldt (1986: 50) found in Buffalo that working class respondents were much more likely to identify with the Democratic party if they lived in strong rather than weak working class neighbourhoods (0.60 as against 0.48: for non-working-class individuals the proportions were 0.49 and 0.37); non-working class individuals were less likely to identify as Democrats but both classes were more likely to do so if they lived in working class neighbourhoods. Furthermore, members of the middle class (according to their occupation etc.) who identified with the working class were much more likely to identify as Democrats the more working-class friends they had and the more working-class the neighbourhood in which they lived. These differences according to context extended well beyond political affiliation: friendship selection, ethnic loyalties, and residential satisfaction were also linked to neighbourhood social characteristics and were influenced by both structured, primary-group, and unstructured (casual) interactions within the local milieu.

A study of contextual effects on voting in South Bend, Indiana at the 1984 Presidential election found that most discussion partners lived in the same neighbourhoods (Eagles et al., 2004: the original study by Huckfeldt and Sprague, 1995, is discussed in more detail below). The survey interviewed not just the sampled respondents (clustered within neighbourhoods) but also their main discussion partners. Most conversation partnerships were quite local: on average, discussants lived 2.76 miles apart. Conversations with neighbours tended to be over very short distances – on average they lived half a mile apart. Conversations between family members, work colleagues or fellow church members spanned larger distances – 3.8, 3.6 and 3.1 miles respectively on average. That said, how far apart discussion partners lived had no independent impact on the transfer of political influence within the conversation partnership (Eagles et al., 2004: 215). Other factors were much more important in this regard: the more alike discussion partners were – the closer their friendship, sharing the same religious affiliation, sharing the same partisanship, and so on – the more likely they were to agree.

These survey data pre-date widespread use of the internet and mobile phones, which many argue have changed the nature of conversation networks; proximity is no longer as important for sustaining contacts and delivering information, it is claimed. Wellman and Potter (1999) identified three types of community – lost, saved and liberated – which differ, among other characteristics, on the importance of face-to-face and phone contact. Surveys of Toronto residents in the 1960s showed that although ‘people who live near each other continue [as in traditional gemeinschaft communities] to have more frequent contact’ (p. 64) nevertheless proximity in this case is a relative concept. Most of the networks involving non-kin friends were metropolitan-wide in their spatial range rather just the respondents’ immediate neighbourhoods; only 13 per cent of their most intimate relationships were with people living in the same neighbourhood (Wellman, 1979, 1996).

Wellman’s data allow exploration of whether distance was an important constraint on social interaction prior to the internet’s creation, and provided a baseline against which later studies could be assessed. A 1978 survey showed not only the expected distance-decay pattern in the intensity of social interaction with both kin and non-kin intimates, but also a marked decrease in the frequency of face-to-face contacts if the distance between their addresses exceeded five miles (Mok et al., 2007) – although no
respondents had most of their active social ties with individuals living within one mile’s walking distance of their homes (Wellman et al., 1988); telephone contact only starts to decline beyond a distance of 100 miles. A 2005 survey of residents in the same area showed that, as in 1978, face-to-face contact declined above an inter-home distance of five miles, and phone contact at about 100 miles, but email contact was only slightly sensitive to distance. There is thus a continuing pattern of face-to-face contact being locally-, and phone contact regionally-structured, but internet-enabled communication is largely unconstrained by distance (Mok et al, 2009). Social networks have not been transformed but rather extended, therefore, and the relative importance of local as against regional and distant contacts depends on whether they are kin or non-kin, intimates or not, since the intensity of contact varies by group, as well as by income (Carrasco et al., 2008).

A parallel study of movers to a ‘wired’ suburb (Hampton and Wellman, 2001) found that those who did not realize the internet’s potential experienced a decline in their social contacts after moving, whereas those who did experienced no change – but this included contacts with their neighbours as well as with more distant others. Hampton and Wellman thus concluded – p. 491 – that although for some the move reduced both contact with and support from friends and relatives, for internet users being wired fostered contact and support both near and far, in what Wellman (1999) describes as a more ‘loosely-coupled world’.

As cyberspace becomes more important and localized, intense communities apparently decline in their significance we move towards what Wellman (2001, 3; see also Zelinsky and Lee, 1998) terms glocalization:

Except in situations of ethnic or racial segregation, contemporary Western communities are usually loosely-bound, sparsely-knit, ramifying networks of specialized ties. Rather than being full members of one solitary neighbourhood or kinship group, community has become “glocalized”.

Contemporary urbanites juggle limited memberships in multiple, specialized, far-flung, interest-based network communities as they deal with shifting amorphous networks of kin, neighbours, friends, workmates, and organizational ties. Only a minority of network members are directly connected with each other. Most friends and relatives live in different neighbourhoods; many live in different metropolitan areas. At work, people often work with distant others and not those sitting near them. People usually obtain support, sociability, information and a sense of belonging from those who do not live in the same neighbourhood.

Piselli (2007: 872), on the other hand, asks ‘have places – or local areas comprising the values, knowledge, institutions, productive skills, and feelings of belonging on which the recognition and self-recognition of local identity are grounded – lost their importance?’ and answers ‘It appears that they have not’. New types of community may be emerging ‘based largely on interactions devoid of physical contact and reciprocal recognition of identities’ (p. 875) but this is just one of the many ways in which people interact: it enriches and expands, rather than replaces the ‘social networks that define and redefine places, which change their functions, features, and symbolic meanings’ (p. 875).

INFORMATION FLOW THROUGH NETWORKS AND NEIGHBOURHOOD EFFECTS
Whatever their spatial dimensions, social networks are communication conduits through which people exchange information (which may be either factual only or involve value judgements). Those flows can influence beliefs, attitudes and behaviour, so knowing who speaks to whom, about what, can be crucial in exploring who thinks and does what. In political contexts, for example, this can include discussions about a variety of matters – parties’ policies, governments’ performance and individual politicians’ leadership credentials. In turn, such material may influence how people vote. Study of social networks in operation can thus enable investigations of political action and advance understanding of election outcomes. Further if many social networks, especially those based on face-to-face interaction, are spatially configured, then information flowing through locally-focused networks should generate clear patterns of political behaviour.

Following this argument, research should focus on the flow of electorally-relevant information through local networks but few have adopted this format, for a variety of reasons – many associated with the cost of such intensive research strategies. Thus, as exemplified here, most research outcomes have either: identified voting patterns consistent with the neighbourhood effect concept, inferring that these have been generated by local residents’ conversations; or studied decision-making in the context of people’s conversations, which if they show that these lead to some changing their minds can imply an outcome consistent with neighbourhood effects. The two should be integrated, but few studies have done so, hence the organization of the following sections.

**Local social context and neighbourhood effects**

During conversations within a social network a majority of whose members support one view/candidate/party, the weight of opinion encountered is more likely to lead to adherents of a minority view switching to the majority than vice versa. The outcome would be the majority view dominating the network to a greater degree than could be predicted from knowledge of individual members’ personal characteristics alone. And if those conversation networks are spatially constrained, the political complexion of areas should be more polarized than their social composition implies – as suggested by Cox (1969) in a seminal paper.

This argument has underpinned a large number of ecological studies using aggregate areal data at a variety of scales: the independent variables, representing the local context, are usually census socio-economic and demographic data and the dependent variables are election results. In many the areal units deployed are at much larger spatial scales than the local neighbourhoods within which much social interaction is assumed to occur. Nevertheless, if they identify polarized patterns associated with the neighbourhood effect this offers circumstantial evidence sustaining that argument. If, say, the Labour party in a dominantly working-class British Parliamentary constituency (with c.70,000 voters) has a greater share of the votes cast than predicted from its class composition (Johnston et al., 1988), this could indicate that: (a) more neighbourhoods in the constituency have predominantly working-class than non-working-class populations; and (b) that therefore a pro-Labour neighbourhood effect dominates across the constituency. There may also be differences between types of neighbourhood within urban areas: Cox (1968), for example, found strong evidence of
neighbourhood effects in London’s suburbia – where local social networks might be more developed than in inner city areas characterized by much greater population mobility (suburban gemeinschaft but inner-city gesellschaft) – and Walks (2004, 2005) has identified growing inner city-suburban polarization in both British and Canadian cities more recently, with surveys suggesting that much of this in the Canadian context is a consequence of households selecting to live in areas among others with whom they (assume that they) share basic, including political, values (Walks, 2006).

Such circumstantial evidence (reviewed in Johnston and Pattie, 2006; see also Cho and Rudolph, 2008, and, more generally, Blasius et al., 2007) has increasingly been sustained by studies which merged survey data on individuals’ voting behaviour with census data on their local contexts. (Early examples were Wright, 1977, and Harrop et al., 1992.) Such work has been extended recently with studies using contextual data for what are termed ‘bespoke neighbourhoods’ in which very small area census data are used to identify the characteristics of the immediate area around each separate respondent’s home. These too have found patterns entirely consistent with the neighbourhood effect: voters from any class background were more likely to vote for a party the larger the proportion of the local population drawn from that party’s ‘natural’ class supporters (McAllister et al., 2001). Furthermore, this relationship was found for bespoke neighbourhoods defined at a variety of spatial scales: the greater the intensity of local support for a particular party, the greater the polarization of voting towards it (Johnston et al., 2001, 2005a, 2007); such polarization was also much stronger among respondents, the higher their levels of local social capital and interaction with their neighbours (Johnston et al., 2005b; see also Fone et al., 2006: Walks, forthcoming, looks at political behaviour within Canadian gated communities, locales where households have clearly selected to distance themselves from other groups within society).

Social interaction is only one of the processes that can generate neighbourhood effect-consistent patterns, however. Many voting decisions are based on people’s evaluations of government policy, especially economic policy. They tend to reward governments that have delivered prosperity by voting for their return to power, but punish them by voting for an opposition party (especially one that seems likely to govern well) if they have not. Such calculi operate at a variety of scales: the individual (‘Have I prospered over the last year?’; ‘Do I think my income/quality of living will improve over the next year?’); the national (‘Has the national economy improved recently?’; ‘Will it during the immediate future?’); and the regional/local (‘Have things improved locally recently?’; ‘Will they continue to do so?’: Pattie and Johnston, 1995). And they refer to a range of government policies (Johnston and Pattie, 2001a, 2001b). Context is important in these calculi too: studies using the bespoke neighbourhood approach found that people economically optimistic about their own financial situations were less likely to vote for the government if they lived in relatively deprived areas than if they lived in places where their neighbours were prospering too (Johnston et al., 2000). Context, it seems, stimulated altruistic behaviour – implying that people were in contact with, and were concerned for, their neighbours.

Another geographically-variable influence on voting decisions is party campaigning, much of it spatially focused to ensure that a party’s supporters turn out in those
constituencies where their participation is most needed – marginal seats that could be won or lost depending on who abstains. Such campaigning has become increasingly targeted through a range of advertising and other strategies aimed at contacting and mobilising individual voters (and hoping that they will mobilize others through their social networks) – with clear impacts, especially as a consequence of the intensity of campaigns mounted by opposition candidates/parties (Pattie and Johnston, 2009). The outcome is also likely to be a pattern of voting consistent with that generated by the classic neighbourhood effect: it could mean that social interaction is an irrelevant influence, although those contacted by a party may well transmit the message to their neighbours. However, analyses incorporating both economic voting and party campaign intensity into the bespoke neighbourhood approach have shown that all three are complementary: parties perform better in areas where they have stimulated prosperity, where they have campaigned most intensively, and where the local social networks are favourably inclined towards them (Johnston et al., 2007). In sum, therefore, a substantial body of research findings is entirely consistent with the neighbourhood effect hypothesis, strongly implying that information flowing through local social networks influences voting decisions – but that evidence is overwhelmingly circumstantial only.

Conversion through conversation

Discussion between citizens lies at the heart of most theories of democracy. For democracy to function there has to be scope for diversity of opinion, free expression of those opinions, and resolution of differences and conflicts. Political conversations provide one means for spreading salient information, opinion and argument, and can enable individuals to determine their positions on the relevant issues and/or personalities by testing their views against others’. A celebrated two-step flow model of political communication, for instance, argues that local ‘opinion leaders’ pick up political information from the media and in turn pass this on, often in an evaluated form, to others in their communities with whom they are in contact (Katz and Lazarsfeld, 1955).

Individuals’ social networks might be dominated by people who largely share their own views, prejudices and values, but they may encounter others with very different attitudes. Conversations are likely to reinforce one’s own beliefs in the former case, whereas in the latter they may well cause individuals to question their opinions – especially if they are not strongly committed to any position, candidate or party and hold minority views within the conversation network. Other things being equal, therefore, holders of minority views may change their minds and agree with the network’s majority. Evidence supports this argument; the more supporters of a particular party individuals talk to, the more likely they are to switch their vote to that party if they previously either voted for an alternative or abstained (Huckfeldt and Sprague, 1995; Pattie and Johnston, 2000, 2001; Levine, 2005).

Involvement in relevant conversations could also encourage political participation (Putnam, 2000), providing information on how to take part and indirect confirmation that one’s associates are likely to participate, hence enhancing the impact of social norms – although those already likely to participate may, as a result of their commitment, be more likely to discuss politics with others than those not intending to participate. Studies confirm that those with extensive conversation networks
participate more than those with limited networks, particularly if conversations are politically focused (Leighley, 1990; McClurg, 2003, 2006a, 2006b; Kotler-Berkowitz, 2005).

The content of conversations is likely to be at least as important as their prevalence. It is one thing to be surrounded by individuals who all confirm the correctness of one’s own opinions (which some may seek to achieve by their choice of networks: Finifter’s (1974) study of American car plant workers demonstrated that individuals who held a minority view – supporting the Republicans in a predominantly Democrat-voting environment – not only were more likely to form friendships with like-minded people at work, but were also less likely than their Democrat-supporting workmates to discuss politics outside the workplace). It is potentially quite another to be faced with widespread disagreement. Most encounter at least some disagreement within their discussion networks, however, and few can entirely insulate themselves from heterogeneous opinions; pressures towards homogeneity within networks notwithstanding, disagreement is an endemic feature of conversation (Huckfeldt et al., 2004). And, of course, some disagreement is essential for influence to occur (McPhee, 1963): where people agree entirely, they cannot persuade.

The extent of the impact of intra-network disagreement on participation has proved controversial. Classic pluralist accounts of democracy suggest that where differences of opinion exist, people and/or groups will be mobilized to represent the various views expressed, thereby acting as mobilising forces themselves (Dahl, 1989). But psychological models suggest that as most individuals are conflict-averse they will try to avoid it, by either acquiescence or silence (Festinger, 1957; Ulbig and Funk, 1999). Some have shown that countervailing opinions in discussion networks can discourage participation, in part by increasing uncertainty (Mutz, 2002a, 2002b, 2006; Mutz and Mondak, 2006; Pattie and Johnston, 2008; Campus et al., 2008). McClurg (2006a), on the other hand, reports that disagreement’s impact is modified by context, in particular by whether an individual is part of a local political majority or minority. His results suggest that political participation by individuals sharing their local context’s majority view is unaffected by exposure to disagreement but those in the local minority become less likely to participate as their exposure to disagreement increases: disagreement disincentivizes participation by the latter.

Individuals are more likely to participate if they feel their discussants are politically sophisticated and less likely if they feel discussants lack expertise (McClurg, 2006b). Furthermore, they are more likely to discuss politics with those they perceive to have some political expertise and knowledge than with those whose knowledge they doubt – irrespective of whether they share the partisan leanings of the person they see as politically expert (Huckfeldt, 2001). Judgements regarding discussants’ political expertise are solidly based, drawing on knowledge of their education, political understanding and partisanship: people who are likely to know more about politics are perceived as indeed knowing more, and are hence more likely to be chosen as sources of politically-relevant information (Huckfeldt, 2001; Huckfeldt et al., 2000).

Work on UK political conversation networks sheds further light on this, much of it based on data from the 1992 and 2005 British Election Studies (BES), which asked survey respondents for information on those they discussed politics with. In 1992, respondents were asked to give information on three such individuals (including their
relationship to the respondent, their employment, the extent to which the respondent generally agreed with them, and the respondent’s view of their partisanship). In 2005, respondents were asked the extent to which they discussed politics separately with their partners, family members, friends, neighbours, and workmates: they were also asked to assess – very roughly – the proportion of their political discussants in each group with whom they shared the same party affiliation. While the earlier survey gives insights into particular discussion partnerships, therefore, the latter gives a less detailed but wider idea of the extent of individuals’ discussion networks, and the extent of political agreement within these networks.

These respondents were influenced by the views of those they discussed politics with. Among those who did not vote for the Conservatives at the 1987 general election, for example, 54 per cent of those who changed their mind and voted for the party in 1992 named a Conservative supporter as their most important discussant, compared to only 12 per cent of those who did not vote Conservative at either election (Pattie and Johnston, 1999: 882). Similar effects hold for conversations with supporters of the other major parties – individuals who changed their vote in 1992 were much more likely to have talked to a supporter of that party than were individuals whose vote did not change. The corollary also held: talking to a party’s supporter decreased the likelihood of switching one’s vote to that party’s rivals. Thus of those who did not vote Conservative in 1987, just under 9 per cent of those who did vote for the party in 1992 named a Labour supporter as their main discussant, and 6 per cent named a Liberal Democrat: the comparative figures for those who did not vote Conservative in either election were 32 and 12 per cent respectively. (The lower figure for discussions with Liberal Democrat supporters reflects their third party status – there were fewer Liberal Democrat partisans to encounter than either Conservative or Labour partisans, and hence fewer opportunities for conversation with them.) Not surprisingly, the more supporters of a particular party people talked to, the more likely they were to vote for that party in 1992 if they had not done so at the previous election (Pattie and Johnston, 1999: 885). Discussions with spouses and family members were particularly influential (see also Stoker and Jennings, 2005; Zuckerman et al., 2005, 2007; Verba et al., 2005), but conversations with non-relatives had an impact too, and respondents were more influenced by the partisan leanings of discussants they generally agreed with on most matters than by discussions with those they felt they generally disagreed with: people were more likely to listen to those whose views they felt generally made sense than with those whose opinions they routinely discounted (Pattie and Johnston, 2002). The influence of conversation remained even after controls were introduced for factors such as class, age, gender, and economic evaluations (Pattie and Johnston, 2000). And analyses of inter-election change between 1992 and 1997 using panel data (hence tracking the same individuals over time) yielded similar results (Pattie and Johnston, 2001).

The impact of political conversations among British voters is not limited to vote choice but also influences underlying political attitudes. Using BES panel data for the 1992-1997 inter-election period, Pattie and Johnston (2001: 35) show that the more Conservatives respondents reported talking to, the greater the probability that their attitudes would become more right-wing over time. Conversely, the more Labour supporters they discussed politics with, the more left-wing (and the more libertarian rather than authoritarian) their views became.
Recent interest in theories of deliberative democracy is driven in part by notions of the wider beneficial effects of political discussion (e.g. Fearon, 1998; Fishkin, 1995). Interest here focuses not only on ‘conversion by conversation’ effects but also on the putative impact of discussion on individuals’ abilities to accept opponents’ views as legitimate and reasoned – even if not ultimately convincing. To the extent that discussion exposes individuals to opposing views, and forces both discussants to explain the reasons for their opinions, then it should (according to the theory) make them more understanding of views they do not hold. Deliberative democracy theorists therefore see political discussion as central to the development of habits of tolerance. While the theory itself is notoriously difficult to pin down empirically, some progress can be made via middle-level theories and analyses (Mutz, 2006, 2008).

Much of the empirical research on the topic reinforces this claim (Conover et al., 2002; Mutz, 2006; Mutz & Mondak, 2006; Pattie and Johnston, 2008; Searing et al., 2007). The more people discuss politics, and the more political disagreement individuals encounter in their discussion networks, the more readily are they able to understand why others hold views which diverge from their own (Mutz, 2006; Mutz and Mondak, 2006). The more they discuss, and the more they encounter divergent views in those discussions, the more tolerant they become, both of others’ political opinions (and their right to hold those views) and of different lifestyle choices (Mutz, 2006; Pattie and Johnston, 2008). Discussion in general and encountering opposing views in particular also encourages individuals to clarify their own views – presumably the better to defend them in discussion. Responses to attitude questions in the 1992 and 2005 BES show that individuals who report relatively high levels of political discussion and of disagreement in those networks give fewer ‘don’t know’ responses to opinion questions, and more clear opinions, than those who report little or no disagreement or little political discussion of any sort (Pattie and Johnston, 2008). Furthermore, those who talk politics extensively and those who encounter much disagreement also report higher levels of perceived political efficacy than those whose discussion networks are limited, consensual or apolitical: those encountering disagreement are more confident of their political abilities than are those who do not.

One possible objection to such an argument might be that causation runs from attitudes of tolerance and feelings of efficacy to reports of discussion and disagreement, not vice-versa. Those who are most confident of their own views and political efficacy, and most tolerant of others, therefore, would be most likely to seek out political conversations and least concerned by the risks of encountering countervailing views – and hence most likely to report disagreement. To some extent, this is undoubtedly the case. However, recourse once again to 1992-97 BES panel data shows that, even when we take pre-existing levels of tolerance and personal efficacy into account, the greater the degree of political discussion and general disagreement in particular individuals report, then over time the more tolerant they become, and the more politically efficacious they feel (Pattie and Johnston, 2008: 695).

Active political discussion in social networks not only influences vote choice, therefore, but also has wider beneficial effects on civic attitudes, especially where this exposes individuals to views counter to their own. But political disagreement in social networks is not necessarily an unalloyed good; encountering disagreement may demotivate people from taking part in politics, even as it also increases their levels of
tolerance (see especially Mutz, 2002a, 2002b, 2006). Being better able to understand others’ views may lead to confusion over, or falling confidence in, one’s own opinions, for instance. Or individuals encountering active disagreement may come to feel theirs is a minority view, and hence see little incentive for political participation: if I am consigned to a permanent minority, what point is there in my taking part? To the extent that this is the case, therefore, political disagreement within social networks might be counterproductive for democracy: a citizen body of tolerant, understanding people may be pleasant to live in, but of limited political use if no-one participates as a result.

Much of the empirical research demonstrating the demotivating effects of disagreement in discussion networks has focused on the USA, however, and on one form of political participation there, voting. Looking at different political contexts and different forms of political activism suggests a more complex, and less bleak, picture. McLurg’s (2006a) work on the importance of political context found that people who hold the local majority view are just as likely to participate in politics whether or not they encounter disagreement: it is those who hold a locally minority opinion whose chances of participation fall if they encounter divergent views. But recent work using British data suggests that the sort of political activism envisaged may also be important. Voting is not the only way of getting involved politically and the British Citizen Audit survey of 2000 reported three quite distinct styles of political engagement (Pattie et al., 2004): individual activity, such as voting, petition-signing, and ethical consumption (actions which a citizen can engage in alone and which do not require the co-operation of others); contact activism (contacting those in power – politicians, the media, etc. – to achieve some end); and collective activism (forms of political engagement which require active co-operation between like-minded people – strikes, various forms of public protest, and so on). The 2005 BES data suggest that it is important to take into account what form political activism will take (Pattie and Johnston, forthcoming). Other things being equal, British voters with large political discussion networks were more likely to turn out at the 2005 general election than were those with small networks. But the extent of disagreement encountered within those networks had a negative – albeit only weak – effect on turnout: once network size and a wide range of other factors were taken into account, those who reported a relatively high density of disagreement within their discussion networks were less likely to vote than those whose networks were more politically homogeneous. That said, the negative effect was very small (although statistically significant), and was comfortably overshadowed by the positive impact of larger discussion networks. But for other forms of political activism, the picture was somewhat different. Individuals’ probabilities of volunteering to take part in political or community campaigns actually increased the greater the level of disagreement they encountered in their discussion networks (although the effect was again small and swamped by the much larger and positive impact of larger discussion networks per se). Similar positive effects emerged for various measures of potential future activism – including voting, community involvement and participation in party politics. It is premature to argue that encountering conflicting views discourages political involvement, therefore: it may actually encourage it.

*Putting it all together*
What much of the literature reviewed above lacks is an integration of the two main approaches to studying neighbourhood effects – information flow through social networks, and spatially-polarized aggregate voting and other behavioural patterns (reflecting similarly polarized norms). Its conclusions provide strong circumstantial support for the argument that locally-focused social interaction influences people’s voting decisions in ways that are very likely to generate polarized patterns, but the evidence is not conclusive.

A few have sought to remedy this – largely through very small-scale studies of selected locales (e.g. Fitton, 1973) or deploying sample data in which contact with neighbours was surveyed (Curtice, 1995). By far the most important studies of social networks in their spatial settings, however, have been the large sample surveys conducted by Huckfeldt and his collaborators. The original, seminal work (Huckfeldt and Sprague, 1995) used a survey of the residents of South Bend, IN, who were interviewed on three occasions before and after the 1984 US presidential election and provided information about those with whom they discussed political issues (subdivided into spouses, other kin, and non-kin: these discussion partners were also interviewed). These and other data on the individual were integrated with data on the neighbourhoods in which they lived; one-third of the nominated discussants lived in the respondents’ home neighbourhoods and 40 per cent worked at the same location. (Only 6 per cent were both workmates and neighbourhood co-residents.) The impact of discussants’ political choices was greatest when the respondent’s nominated main discussant was her/his spouse; outwith the immediate household, the main discussant’s influence was greatest when the respondent correctly identified that person’s own political preferences (in 1984, whether or not he/she supported Reagan or Mondale).

Huckfeldt and Sprague’s (1995: 189) conclusion that ‘vote preferences are socially structured, not only by the characteristics of the voter, but also by the characteristics and preferences of others with whom the voter discusses politics’ was extended by incorporating further variables to represent not only the political characteristics of their respondents’ neighbourhood socio-political milieux but also the apparent intensity of the election campaign there. They found that partisan contact with voters in a neighbourhood influenced not only those contacted but also others in the locality, with the initial contact thus acting as ‘a catalyst that sets into motion a series of events’ (p. 255) because ‘people know their neighbour’s politics, and one reason they know is party organization aimed at informing them’ (p. 254). Thus the proportion of a neighbourhood’s respondents who supported a particular party (the sample was spatially clustered to allow this to be estimated) was strongly related to whether an individual living there also identified with that party, whatever her/his individual characteristics. Not everybody is converted to the local majority view, of course, especially if disagreement is inconsistent with the general tenor of opinion within an individual’s network (Huckfeldt et al., 2002). And reaction to the local milieu depends upon the nature of that awareness: Baybeck and McClurg (2005) found that a substantial majority of the South Bend respondents could accurately represent the characteristics of their home neighbourhood – and then, as they put it, ‘When a neighborhood’s majority becomes obvious, even opposing voters seem capable of figuring that out’ (p. 509).
Although the early Huckfeldt studies integrated social networks and neighbourhood contexts much more firmly than almost all other analysts had, nevertheless the network geographies were to a considerable extent inferred. Later work in two cities took the work further, by using post-coded information on the respondents’ and their main discussants’ homes to establish the degree of network spatial dispersion. As anticipated from other work on the geography of social interaction reviewed earlier, the networks were not intensely localized: for kin (excluding spouses) only 23 per cent lived within 1km. of the respondent’s home and the average distance between the two locations was 6.4km.; for non-kin, the percentage was only 15 and the mean distance 8.4km. – nevertheless over half of this group lived within 15 minutes’ driving time of the respondent’s home (Baybeck and Huckfeldt, 2002a). The more dispersed the network, however, the less intense the discussions taking place within it. Information is spread more widely through the more dispersed networks, across a wider range of neighbourhoods contexts – so that even though they do not necessarily connect individuals who are socially and politically more diverse than is the case with the spatially more clustered networks, they act as the ‘bridges between socially and politically diverse locales’ (p.273). This is what Granovetter (1973) terms the ‘weak ties’ that introduce (perhaps dissonant) information to otherwise separate networks and locales, even though two individuals so connected are less likely to converge in their opinions over an election campaign than are two similar individuals who are members of spatially higher density networks, among whom contact is also more frequent (Baybeck and Huckfeldt, 2002b). Spatially dispersed networks, it seems, create a politically homogeneous overlay on a politically diverse urban area – a conclusion that is now being explored with experimental data (e.g. Ahn, Huckfeldt and Ryan, 2007).

IN CONCLUSION

Social networks are key to many of the myriad flows within society that diffuse information and knowledge, processes that in turn influence people’s behaviour and actions. A great deal of evidence – much of it reviewed elsewhere in this volume – has been generated to sustain this argument and show that who you talk to can be very influential on what you learn and what you do.

One aspect of this argument that has received somewhat less attention than others is its spatiality, or the geography of social networks. It is generally assumed that proximity/propinquity are fundamental to network structures and operations – we are more likely to know near than distant neighbours, more likely to interact with those who live close to our homes and whom we may encounter in a range of structured as well as unstructured arenas. If this is so, then the spatial concentration of social networks can have substantial implications for the geography of attitudes and behaviour; those who live in relative close proximity are more likely to think and act in similar ways because of the spatial selectivity of information flows – a spatial polarization often referred to as a neighbourhood effect.

This argument – as illustrated here – is frequently tested with circumstantial evidence only; if attitude and behavioural patterns are spatially concentrated in the predicted fashion this can be taken as support for the neighbourhood effect hypothesis. And many social networks are spatially concentrated, as we have demonstrated using examples taken from electoral studies. Further circumstantial evidence is provided by
studies of the processes rather than the patterns, of the flows of information through networks and their impacts on behaviour – but often without any close attention to the networks’ geography: conversation leads to conversion (in the electoral context, ‘those who talk together vote together’, whether within the household or beyond: Johnston et al., 2005; Pattie and Johnston, 2000) irrespective of the relative locations of those involved. But few studies link all the parts together – the geography of social networks, the information flowing through them, and the impacts this has on people’s attitudes and behaviour. Those that do – such as those by Huckfeldt and his collaborators – sustain the entire thesis; networks are spatially biased, information flowing through them influences behaviour – especially information favouring the views of the network majority – and as a consequence neighbourhood effects are generated.

We have largely illustrated this argument using examples taken from one area of social science inquiry only – voting studies. But similar cases have been presented, evaluated empirically and found valid in a range of other subject areas. In education, for example, there is substantial evidence to show that parental and student attitudes to participation and attainment are in part linked to predominant attitudes in their local communities – with consequences for the geography of educational performance (see, for example, Kohen et al., 2008; McCulloch, 2006; Sampson et al., 2002). The same applies to a wide range of health-related behaviours – smoking, for example, and eating unhealthy foods – with consequences for morbidity and life chances (e.g. McCulloch, 2003). There are geographies of criminal behaviour too which are strongly supportive of the neighbourhood effect hypothesis (e.g. Oberwittler, 2007), as also with geographies of unemployment and job-seeking. Where you are influences who you interact with; who you interact with influences what you learn and how you interpret the information and knowledge gained; and such local sources of ‘valued’ information influence how you behave – all of which takes place in spatially-defined contexts, in linked geographies of inputs, processes and outputs.

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