Chapter 2
Social Networks

Introduction

This chapter reviews the main analyses of social networks in the modern world: the community studies and the social capital approach, social network analysis, and the small worlds approach. We then argue for a *mobilities approach* that understands social networks as mobile and performed, having to be practiced to be meaningful and durable. Networks should be viewed as an accomplishment, involving and made possible through various network tools such as cars, buses, trains, planes, laptops, networked computers, personal organizers, mobile phones, text messages and so on. Subsequently we briefly review various empirical studies of the networking practices of mobile professionals, long-distance relationships, fragmented families and diasporic families. Here we argue that much social scientific mobility research works with the notion of autonomous, free-floating individuals and thereby overlooks the relational economies of commitments and obligations to family members, partners and friends that connect people and their networks.

Community Studies and Social Capital

We begin with the classic study by Hoggart who, in writing about a 1930s urban setting, argues: ‘The core of working class attitudes ... is a sense of the personal, the concrete, the local ... first the family and second the neighbourhood’. Later he argues that within ‘the massed proletariat areas’ there are ‘small worlds, each as homogenous and well-defined as a village where one knows practically everybody, an extremely local life, in which everything is remarkably near’ (both cited in Albrow 1997, 40).

Although not all community studies have portrayed communities as so tight-knit, Hoggart illustrates that community studies have looked for social networks and their structures of support, friendship, kinship, place attachment and intimacy as located within particular physically confined localities, such as neighbourhoods.

To develop a more suitable analytical framework, Bell and Newby distinguish three notions of community (1976). First, there is community based upon close geographical propinquity, but where there is no implication of the quality or even presence of the social relationships found in such settlements of co-presence. Second, there is the sense of community as the local social system in which there is a relatively bounded set of systemic interrelationships of social groups and local institutions. Third, there is communion, human association characterized by close
personal ties, belongingness, and a strong sense of duty and obligation between its members. Bell and Newby show that no particular settlement type necessarily produces communion. It can occur where those involved do not dwell in close physical proximity. Geographical propinquity also does not necessitate a local social system, nor does localness necessarily generate communion. It follows that we can have communities without close-knit and interacting social networks and social networks of communion that move across specific places. Yet the social sciences have overly focused upon geographically propinquitous communities based on more or less face-to-face social interactions with those routinely present.

This last orientation can be seen in Putnam's influential US research in _Bowling Alone_ (2000). Putnam argues that good communities depend upon rich and multilayered forms of social capital; this refers to connections among individuals—social networks and norms of reciprocity and trustworthiness that arise from them (Putnam 2000, 19). Communities in the USA with substantial social capital are characterized by dense networks of reciprocal social relations, well-developed sets of mutual obligations, generalized reciprocity, high levels of trust in one's neighbours, overlapping conversational groupings and bonds that bridge across conventional social divides. Putnam also believes that civic-minded and well-integrated communities are essential for economic prosperity and growth. Social bonds and especially involvement in civic work within neighbourhoods are considered crucial to social capital, and it is local face-to-face socializing, church going, political rallying, volunteer work, philanthropy, general trust and reciprocity that have been in decline since the start of the last third of the twentieth century. Strong ties of local communities are fading. American people are less connected, they are likely to be strangers to their neighbours, they have less co-present face-to-face talk and they show little local civic engagement.

In addition to generational changes, Putnam argues that the widespread growth of TV, urban sprawl and travel are major causes of these changes. TV ‘privatizes leisure time … TV watching comes at the expense of nearly every social activity outside the home, especially social gatherings and informal conversations’ (Putnam 2000, 236–7). Slum clearance programmes of the 1950s and 1960s also destroyed those close-knit community ties that involved intensive short-range corporeal mobility (Putnam 2000, 281). America’s liking for resilient mobility is detrimental to social capital:

> Just as frequent movers have weaker community ties, so too communities with higher rates of residential turnover are less well integrated. Mobile communities seem less friendly to their inhabitants than do their more stable communities. Crime rates are higher, and school performances are lower, in high-mobility communities. In such communities, even longtime residents have fewer ties with their neighbors. So mobility undermines civic engagement and community-based social capital. (2000, 204–5)

Putnam notes how two-thirds of car trips involve driving alone and this is growing; the time and distance of solitary work commutes is increasing; each additional minute in daily commuting time reduces involvement in community affairs by both commuters and non-commuters; and spatial fragmentation between home and workplace is especially bad for community groups that historically straddled class, ethnic and gender divides (2000, 212–14).

Putnam outlines how to reverse declining local social capital. One suggestion is that: ‘Let us act to ensure that by 2010 Americans will spend less time traveling and more time connecting with our neighbors than we do today, that we will live in more integrated and pedestrian-friendly areas, and that the design of our communities and the availability of public space will encourage more casual socializing with friends and neighbors’ (Putnam 2000, 407–8). Putnam’s approach to community building and social capital has influenced the UK government’s Innovation and Performance Unit, where one working paper states:

> Geographic mobility can have a detrimental impact upon social capital. Residential mobility breaks up social networks and lessens social contact between friends and family. Relationships that depend on face to face contact—such as informal eldercare and childcare—may suffer from increased mobility. (Donovan, Pich and Rubenstein 2002, 3)

Putnam is not without critics. Some accuse him of being nostalgic in his concentration upon organized leisure such as bowling, Scout troops and church going. While participation in some such traditional institutions has fallen, newer groups such as pub-based soccer clubs and environmental NGOs are flourishing. This can also be seen in the UK where the Kendal study showed declining church and chapel attendance, at the same time as the growth of participation in many new age and ‘spiritual’ associations and movements (Heelas et al 2005).

Overall Costa and Hahncuthere indicate that there is only a small decline in joining groups and no fall in socialising with friends and family members in the evening (reported in Florida 2002, 269–70). Watters (2004) challenges Putnam’s derogatory view on friends and his heroic view of civic organizations. According to Putnam, friends (‘schmoozers’) are only concerned with inwardly focused bonding while civic work is concerned with noble outwardly focused bridging. So schmoozers are causing a decline in civic engagement and therefore a fall in social capital. But Watters reminds us that meetings in Lions Clubs are not only concerned with altruistic, civic matters but also with plain old schmoozing and business networking, and that tight-knit communities often are static, conservative and exclusive. That is, they bond rather than bridge (Watters 2004; see also Florida 2002, 269–70).

Florida, indeed, shows how social networks of friends among youngish (unmarried) city-dwellers can generate much social capital, now that people enter family life at a later stage and are less likely to do traditional civic work. Certainly, amongst ‘the creative class’, youngish well-educated people prefer tolerant and diverse communities of weak ties and do wish to escape Putnam’s tight-knit small-town communities (Florida 2002, 269). Florida further argues that ‘creative capital’ rather than social capital is emerging as crucial for prosperity in contemporary informational economies.

The final point to note is that Putnam’s notion of social capital is at odds with more recent community research that travels beyond local cultures to deconstruct ideas of local cultures, static social networks and fixed places (Albrow 1997; Albrow et al...
through, as Clifford (1997) says, routes as well as roots. Or as Massey puts it: ‘what gives a place its specificity is not some long internalized history but the fact that it is constructed out of particular constellation of relations articulated together at a particular locus’ (1994, 217). Communities are impure and porous. Travel is central to communities, even to those characterized by relatively high levels of apparent propinquity and communion.

Social Network Analysis (SNA)

In this section we examine SNA through the extensive research programme of Wellman and collaborators at Toronto. SNA is concerned with mapping the links between people, organizations, interest groups, places, and so on. It takes as its starting point the assumption that social life, beneath all its apparent messiness, randomness and chaos, is networked, a larger structured web of social connections strung between people and technologies, near and far. In this sense, SNA is concerned with uncovering, rendering visible, already existing networks, their links and properties. It can involve a mathematical analysis of relationships often stretching across distance, and is grounded in mainly quantitative empirical data (see Scott 2000, for a related UK-focused review).

Wellman notes that communities always have and will continue to pervade social existence. In fact, wherever SNA has looked, communities are flourishing (Hampton and Wellman 2001; Wellman 2001, 2002; Wellman and Haythornthwaite 2002; Boase and Wellman 2004). The reason why commentators like Putnam have found a dearth of communities is because they have looked for communities in the wrong places, in neighbourhoods and localities, the traditional sites. Indeed when Wellman talks of communities there are few traces of civic connections and normative expectations. He does not lament the demise of communities because North Americans no longer bowl in leagues, participate in mainstream political campaigns, join neighbourhood associations and regularly attend chapel or church (although Americans do attend those more than any other society in the developed world).

SNA explores the structural properties that connect people in webs of friendship, mutual support and sociality through face-to-face talk, phone conversations and email. SNA illustrates how communities and social capital are tied into and dependent upon technological cultures and virtual spaces: ‘Rather than being exclusively online or in-line, many community ties are complex dances of face-to-face encounters, scheduled meetings, two-person telephone calls, emails to one person or several, and broader online discussion among those sharing interests’ (Wellman 2001, 237). Network ties exist in and across both physical space and various virtual or cyberspaces (Wellman 2001, Wellman and Haythornthwaite 2002). Thus communities are in flux, transforming and even developing on the move within loose networks:

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1 However it should be noted here that Putnam and Wellman strangely only sporadically refer to each other.
and connectivity, most emails are local and concerned with local arrangements, sustain connect with familiar faces and arranging and rescheduling face-to-face meetings (Wellman 2001, 236; Boase and Wellman 2004). 'Frequent contact on the Internet is a complement to frequent face-to-face contact, not a substitute for it' (Wellman, cited in Putnam 2000, 179). A study of American college students showed that 64 per cent of them used face-to-face, telephone and the internet to conduct their social life. Only 2 per cent relied solely upon face-to-face connections (Byam, Zhang and Lin 2004, 306).

Third, with person-to-person community, the person 'has become the portal' (Wellman 2001, 238). The turn to person-to-person results from innovations in communications; according to Wellman: 'the technological development of computer-communication and the societal flourish of social networks are now affording the rise of networked individualism' (2002, 2; see also Castells 2001).

Whereas the emblematic technology of place-to-place connectivity was the fixed landline telephone, the mobile phone is the technology of person-to-person communities. 'Mobile phones afford a fundamental liberation from place, and they soon will be joined by wireless computers and personalized software' (Wellman 2001, 238). While landlines eliminated the prerequisite of physical proximity, they reinforced the need to be at specific places. Personalized, wireless worlds afford networked individualism, each person is, so to say, the engineer of his/her own ties and networks, and always connected (technology permitting!), no matter where she/he is going and staying. Person-to-person brings about what Wellman calls 'mobile-ization' that 'suits and reinforces mobile lifestyles and physically dispersed relationships' (2001, 239). Or as Licoppe reports: ‘the mobile phone is portable, to the extent of seeming to be an extension of its owner, a personal object constantly there, at hand ... Wherever they go, individuals seem to carry their network of connections which could be activated telephonically at any moment' (2004, 139).

The mobile phone frees people from much spatial fixity (Geser 2004, 4). Central to this notion of ‘networked individualism’ is that friendships and networks are chosen and specific. People know and socialize with an increasing number of friends, workmates and ‘networks’, but these relationships are specialized in the sense that they revolve around particular roles, skills, leisure pursuits, places and sites; they dissolve if they cease to satisfy these functions (Wellman 2002, 6). Networked individualism can produce many weak rather than strong ties. As Granovetter (1983) has taught us, bonds and ties come both as weak and strong; some people have strong ties with a few people (partner, parents, best friend and so on) and weak(er) links with a large group of people. Weak links are crucial for linking different networks, and Granovetter speaks of them as bridges: weak links bridge once-separated networks in the same fashion as bridges connect once-separated pieces of land and people. Such weak ties connect people to the outside world, providing a bridge other than that provided by close friends and family. Without bridges communities would degrade into isolated small worlds of cliques.

Networks are said to be increasingly individualized, part of a wider individualization of ‘reflexive modern societies’, Wellman’s notion of ‘networked individualism’ has much in common with the individualization theses of Giddens (1994) and Beck. To cite the latter:

‘The individual as actor’ is the ‘designer, juggler and stage director of his own biography, identity, social networks, commitments and convictions’ (Beck 2001, 166).

From our viewpoint Wellman and his collaborators work focused on communications through the internet and mobile telephony while paying limited attention to travel and the detailed spatial distribution of network members (this is true of SNA more generally). This is striking, given the attention as to how communication technologies connect people in order to arrange future off-line meetings. There has been less attention paid to how people attend such meetings, where they are located and how much travel they entail. There could have been greater examination of how trains, buses, cars and airplanes fit into the shifts from ‘door-to-door’ to ‘place-to-place’ to ‘person-to-person’ relations. We will subsequently ask how travel produces and stabilizes distributed networks, as indeed Wellman and his collaborators are now developing in their Connected Lives project (Wellman et al 2005).

Small World Analysis

A related approach to social network research is the recent small world analysis, which, among other things, attempts to explain mathematically the so-called ‘small world phenomenon’ (see Urry 2004b, on the following). Watts (2003) developed an explanation of the empirical finding demonstrated by various researchers that all people on the planet, whatever their social location, are separated by about six degrees of separation. It is common for people who believe that they are strangers to each other to find that they are in fact connected along a quite short chain of acquaintance. Watts argues that: ‘even when two people do not have a friend in common they are separated by only a short chain of intermediaries’ (2003, 4; Barabasi 2002, 27–30). A small world experience refers to these intermittent occasions where one bumps into an apparently stranger that turns out to ‘know’ one’s partner’s parents’ best friend or workmate. Small world meetings are particularly powerful when away – the farther away – from home. It is this apparently strange small world phenomenon that various authors seek to explain by modelling networks on the edge of order and randomness. They share with SNA the ontological assumption that social life is fundamentally networked.

Small world analysis is also inspired by Granovetter’s analysis of the strength of weak ties (1983). He shows that extensive weak ties of acquaintance and
informational flow are central to successful job searches and, by implication, to many other social processes such as the spreading of jokes and rumours. Granovetter's findings suggest that strong links do not exist in isolation but form triangles. If somehow a strong link should disappear from the network, two steps would still be enough to go from one end to the other. In ordered isolated networks where each person is connected to, say, his or her 50 nearest neighbours, then there would be 60 million degrees of separation in order to go even halfway around the world (Buchanan 2002, 114).

If, though, there are just a few long-range random ties or weak links connecting each of these clumps of 50 neighbours, then the degree of separation dramatically drops, from 60 million to five (Barabási 2002). So it is weak ties - these long-distance bridges - that are responsible for creating the small worlds, for bringing geographically dispersed people into much lower degrees of separation from each other. Watts then shows that a wide array of phenomena, from the networks of film stars to electric power interconnections, demonstrates a similar patterning, a combination of tight clumps with a few random long-term connections.

However, while Watts' and other writings are full of anecdotes about random meetings in foreign places, they discuss small worlds without taking account of the mechanisms of travel, communications and especially meetings that may generate long-term connections (but see Dodds, Muhamed and Duncan 2003). Small worlds, it appears, are universal phenomena of social relationships; they exist in pre-modern and modern worlds with equal force. Wherever people happen to live they are only a short chain of intermediaries away from anyone else (Buchanan 2002, 35). These authors explain small worlds through mathematical abstraction; they prove that in any society (whatever scale) with just a few weak social ties or bridges (so basically all societies) no person is more than six degrees from any other person.

While the six degrees of separation thesis is intriguing, it is those links - direct and indirect - within one or two steps of separation that seem crucial for most peoples' patterns of everyday life (Watters 2004, 105). Such connections between people presuppose intermittent meetings. They are not cost free. Although people may 'know' others in a short chain of acquaintanceship, this will produce less affect than if they intermittently meet. Indeed in some senses people might be said only to 'know' each other if they do meet intermittently (although it might be that intense meetings at one time, say as students, can then carry the relationship without so many further meetings). Also it would seem that those with the largest number of weak ties will tend to be advantaged in such meetings, so producing many more weak ties.

We might thus suggest that a network only functions if it is intermittently 'activated' through occasioned co-presence. Ceteris paribus, 'network activation' occurs if there are periodic events each week, or month or year when meeting is more or less obligatory. And meetings involve massive amounts of physical travel. Social networks are, it seems, less coherent with fewer overlapping multiple affiliations, people's residences and activities are spatially more distributed and when people do meet face-to-face this normally involves longer-distance travel. In 1800 in the USA people on average travelled 50 metres a day - now they travel 50 kilometres a day (Buchanan 2002: 121).

Small world analysis thus never really examines how links are organized and reinforced through specific meetings and travel to connect with particular weak and strong ties. So Buchanan reports that each 'social network has not been designed by anyone. It has evolved through countless historical accidents - people meeting people by chance' (Buchanan 2002, 41). But such meetings are often not by chance but by design, as the fourth approach here tries to examine in depth.

**Mobilities Approach**

Departing from and elaborating upon the three approaches just reviewed, this project develops a fourth approach to social networks based upon the systematic examination of physical, imaginative and virtual travel and of their interdependencies (Sheller and Urry 2006). This mobilities approach argues that extensive regional, national and transitional flows and meetings of objects, technologies, representations and people (may) produce small worlds. Bridges are crucial, but so are the traffic, the meeting-places and greetings along these bridges. It examines how this traffic can take place through cars, buses, trains and airplanes, and through letters, emails, telephone calls, photographs, websites and videoconferences. These 'network tools' of 'network capital' (Axhausen 2005b) make the world smaller by affording long bridges and fast connections between geographically dispersed people, and between people and places. Social networks involve diverse connections, which are more or less at-a-distance, more or less intense and more or less mobile. There are thus material worlds that organize and orchestrate networks, especially those ties that lie beyond the daily or weekly face-to-face relations. Human practices and social networks are moreover intricately networked with extensive material worlds, with various technologies, machines, software, texts, objects, databases and so on that organize the very nature of social life (Licoppe and Smoreda 2005; see also Haldrup and Larsen 2006).

The mobilities approach suggests that what is important is not the absolute number of links that people possess; this is a rather abstract issue. Rather meetingness - talking, writing, emailing, travelling and visiting - is crucial to the nature of networks. Although people may know others in a short chain of acquaintanceship,
this produces less consequence than if they intermittently meet, face-to-face, as well
as encountering each other on the phone, texting and emailing. Central to networks
are the form and character of meetings and hence of travel in order both to establish
and to nourish links or at least temporarily cement them. Instead of focusing upon
the formal structures of the networks themselves, this mobilities approach analyses
the embodied making of networks, performances and practices of networking. Social
networks come to life and are sustained through various practices of networking
through email, forwarding messages, texting, sharing gossip, performing meetings,
making two-minutes' bumping-into-people conversations, attending conferences,
cruising at receptions, chatting over a coffee, meeting up for a drink and spending
many hours on trains or on the road or in the air to meet up with business partners,
clients, and displaced friends, family members, workmates, and partners.
For example, Watters discusses how one-to-one and one-to-many emails
particularly helped to bond his network:

We constantly keep track of each other in a never-ending e-mail thread. On an average
week, among my group of friends, there were hundreds of one-to-one e-mails, a dozen
group e-mails, and perhaps fifty phone calls exchanged. I couldn’t vouch for any deeper
meaning in any of these communications or activities, but I could tell you that the subtext
of almost all of them was a clear message of solidarity. That repeated message, from the
group to the individual, was ‘We’re on your side’. (2004, 38)

Networking is effectively work, sometimes tedious and tiring, sometimes enjoyable
and stimulating. The mobilities approach understands social networks as something
accomplished, in process, weaving together the material and the social as well as
those co-present conversations, to the making of links and social connections, albeit
unequal, that endure over time. Such connections derived from co-presence can
generate relations of trust that enhance both social and economic inclusion. However,
to be lacking in various networking tools (low in what we will call network capital)
reduces the range and practices of travel. Interventions that reduce, channel or limit
such mobilities weaken social capital and generate social exclusion (see Cass, Shove
and Urry 2005).

We now briefly discuss some ethnographic research concerned with networking
as accomplishment and practice, of building and maintaining social ties in mobile
network societies. We start by analysing studies of transnational information work
and continue by discussing research on family life on the move and at-a-distance.
We call this networking for a living and networking for life. It will become evident
that these two sets of network practices often overlap.

Mobile Workers and Global Workplaces

In The Rise of the Network Society (1996) Castells outlines a global analysis of the
‘Information Age’. This informational economy is global as it works on a planetary
scale in real time, and it is networked in that the connectivity of this global economy
is sustained through the organisational idea of the network enterprise.

Wittel in his study of new media workers in London explores what kind of sociality
flourishes amongst the ‘avant-garde’ of this Information Age. He uses the notion of
‘network sociality’. By contrast with traditional closed societies based around mutual
experiences and shared histories, network sociality is an open, individualized and
mobile sociality of integration, disintegration and quick exchanges of information
(Wittel 2001, 51). Thus:

Network sociality is a technological sociality insofar as it is deeply embedded
in communication technology, transport technology and technologies to manage
relationships. It is a sociality that is based on the use of cars, trains, buses and the
underground, of airplanes, taxis and hotels, and it is based on phones, faxes, answering
machines, voicemail, videoconferencing, mobiles, email, chat rooms, discussion forums,
mailing lists and web sites. Transportation and communication technologies provide the
infrastructure for people and societies on the move. (Wittel 2001, 69–70)

Sociality among the sampled mobile urban media workers is fleeting and transient,
intense and energetic. Wittel argues:

Mobility and speed seem to be the primary reasons for this shift from a narrative- or
experience-based sociality to an informational sociality. Mobility is important because
more and more people are on the move and thus somewhere else. In order to re-establish
social contacts, ‘catching up’ becomes an indispensable condition of social situations.
Catching up is essentially informational. And the acceleration of speed in social encounters
is additionally feeding the development towards an informational sociality. (2001, 52)

These media workers ‘see’ and ‘know’ a lot of people and new people speedily travel
in and out of their private and professional lives. In this network sociality there are
few strangers, only potential members of people’s ever-expanding networks. This
quick exchange of contacts commodifies personal relationships, according to Wittel.
Network practices of managing relationships are performed through communication
and transport technologies, as well as through face-to-face networking events where
work and play are blurred: ‘working practices become increasingly networking
practices’ (Wittel 2001, 53). London has a broad range of networking places where
new media people meet up to show their face, catch up and exchange information,
business cards, rumours, deals, greetings and glances. This takes place at specific
networking events, receptions and informally in pubs, wine bars, cafes, clubs and
restaurants. Wittel’s analysis suggests a proliferation of urban places of cool, playful
meetings where members of social milieux bump into each other, do business and
have fun.
The mobile and networked character of networked sociality in the information economy is also examined in Kennedy's study of transnational architects and engineers (2004, 2005). He examines how these highly mobile workers sustain and not least form social networks of both weak and strong ties while on the move, moving from short-term project to short-term project. Kennedy's research suggests that such professional 'global nomads' produce and sustain different kinds of networks compared with migrants and members of diasporas. The latter depend upon support from family as they construct multistranded social relations linking together their new and old environments.

By contrast, global professionals normally go overseas alone on contract and move into cosmopolitan environments less influenced by national cultures (Kennedy 2004, 162). Their social networks consist of like-minded cosmopolitan workmates. They do not think of themselves as company people since their primary loyalty is to their profession. Companies are partly chosen because they demonstrate a 'cosmopolitan culture'. These people primarily participate in localized, small-scale transnational networks constructed around occupational links while on an assignment. Their leisure time is spent with workmates and friends (Kennedy 2004, 164). But, in a somewhat similar way to immigrants and diasporic cultures, these mobile architects form enclavic networks with other mobile architects, engineers and similar people with a cosmopolitan outlook. So these networks have a post-national character (Kennedy 2004, 176). As one architect in his study reported: 'Our friends are mostly people from across the world. They are people who travel both physically and mentally ... people who don't find other cultures to be a problem' (Kennedy 2004, 175).

Such networks are, we can say, on the move. As people move from project team to project team, from city to city, the links and bridges within these networks multiply and expand across time-space. Since these people are rich in networking tools and master the art of keeping in touch, more and more people are enrolled into a revolving circuit of transnational social life. Kennedy sums up: 'Eventually, as friends move and form, or join, other networks with more likeminded individuals in the next host country, and because previous contacts are maintained, yet more friends are added to the revolving circuits of transnational social life' (2004, 176).

Ó Riain also researched transnational teamworking among global professionals (2000). This study shows how software developers from various countries rely upon intense face-to-face teamworking to meet tight project deadlines and search out new projects. These ad hoc project teams have much autonomy in arranging and performing their work so long as they meet the deadline: 'the politics of the contemporary workplace is increasingly the politics of time' executed through tight project deadlines (Ó Riain 2000, 178). To meet these deadlines these groups work together in a shared physical space and forge solidarity and an intense team spirit. However, once the project is finished, the group fragments and people use their networks to become part of a new project, locally or elsewhere.

Ó Riain's and Kennedy's studies show how the distinction between strong ties and weak ties is less marked for those with mobile lives. Weak ties can become strong when working in a project team and they become weak again when the project finishes, if they are not maintained over the distances now involved.

These studies also illustrate the 'liquid' nature of networking and networked sociality. Bauman stresses that the modern workplace has become a 'camping site' where no one stays for long before moving onto the next job (2000a, 149). Networks within workplaces are loosely tied; they are constantly untied and retied; people keep their distance at the same time as they relate: their networks work through instantaneity and disposability. In Liquid Love Bauman summarizes the logic of such individualized networking:

Unlike 'relations', 'kinships', 'partnerships', and similar notions that make the mutual engagement while excluding or passing over in silence its opposite, the disengagement, 'network' stands for a matrix for simultaneous connecting and disconnecting ... In a network, connecting and disconnecting are equally legitimate choices, enjoy the same status and carry the same importance. (2003, xii)

As Florida's research also suggests, such people do not desire the strong ties, long-term commitments and spatial fixity characteristic of Putnam's social capital; they wish for fluid, diverse and mobile communities where one can plug in and out with great ease and easily build a wide range of relationships (2002, 220; and see Sennett 1999 on the resulting 'corrosion of character'). Bauman notes how the lack of trust involved here produces a corresponding significance of those: 'spaces reserved for face-to-face meetings ... [that] play a crucial role in the integration of that elite' (2003, 114).

Although this mobile, networked work is likely to become empirically more significant, it is not yet typical and anyway is constrained by other aspects, especially friendship, relationships and family life. Much mobility research has focused upon professionals with many weak ties but seemingly very few strong ones (for similar research see Beavestock 2005; Kesselring 2006; Lassen 2006). In his ongoing research of 'knowledge industries' as 'transport-generating enterprises', Lassen claims that the work of scientists, engineers, architects, educators, writers, artists, entertainers as we all as many traditional businessmen is characterized by high levels of international mobility and of virtual communication. However, in fact his study shows that the average Hewlett-Packard employee in Denmark only flies 3.8 times a year, while academics from Aalborg University, Denmark, fly only twice a year for academic purposes.

Thus some research here overemphasizes individualized networking and overlooks the relational commitments that people have to their social networks (Conradson and Latham 2005a). However, there are exceptions. Holmes's (2004) study of academics in relationships with partners living elsewhere indicates that many mobile professionals are constrained by their relationship and therefore partly 'directed' by their partner. It also shows that distant relationships can come at a high price; for many couples it is something they have to live with, for shorter or longer periods, if both of them work. An extensive survey in Germany suggests that for about one in three long-distance relationships mobility is a 'forced' choice.
has to sacrifice his or (more likely) her career (2003). The phenomenon of ‘trailing spouses’ is a powerful illustration of this kind of dependent mobility (Cresswell 2001, 2002). We continue this discussion by reviewing some literature and research dealing with family life.

Networked Family Life

The modern family is said to be undergoing major transformations that we will briefly adumbrate. First, family life is becoming plugged into an ever-expanding array of communication technologies that connect families to one another and to the outside world. The typical modern family with two teenagers is said to have several landline phones, three or four mobile phones, a couple of computers, a number of cameras (including a digital one) and video cameras, perhaps four email accounts, at least one car and some travel cards. In addition there are TV sets, DVDs and videos, stereos, magazines and a newspaper as well as various credit cards. The family has become a communications hub: ‘No longer a sanctuary where the family was relatively shielded from intrusions from the outside world, the home is now a communication hub, infused with messages of diverse and increasingly global origins’ (Bachen 2001, 1). Yet these ‘machines’ also enable local ordering as the coordination of seemingly endless journeys to work, school, recreational and domestic activities that would be practically impossible without email, text messages, telephone calls and diaries. ‘Families and technologies in households are inter-connected as elements of the same system’ (Bachen 2001, 2). So there is a widespread adoption of mobility tools by ordinary families that afford the mobilization of social networks, with the making and sustaining of connections at-a-distance.

Second, there is a large increase in the sheer number of households, as each household shrinks in size. This is a global trend, with an annual growth rate in the number of households of 2.5 per cent between 1985 and 2000, while the world’s population is growing by only 1.5 per cent per annum (Liu et al 2003). We might say that families are becoming more networked, becoming less nuclear so much as ‘unclear’ (Bauman 2003). It is claimed that the family is under siege, as signalled by growing divorce rates, single parenthood, joint custody, co-habitation, singles, stepfamilies and gay couples. In particular among couples without children, long-distance relationships are common, especially because women pursue careers more or less as men do (Walby 1997; Holmes 2004, 190). Many dual-career couples will at one point live apart. In Britain, in the late 1990s there were 157,000 divorces; if this trend continues, 40 per cent of all marriages will end in divorce. There are now in the UK 1.6 million lone parents. It is estimated that 7 per cent of all children live with a stepmother or stepfather. Most extended families involve one or more stepfamilies (Allan and Crow 2001, 25, 26, 34). ‘Unclear’ families are fragmented, not only socially but also spatially, with most families moving house after a divorce.

Moving back and forth between one’s mother’s and father’s new place of residence involves considerable travel for children and parents, especially if one of them relocates to another city or region (Allan and Crow 2001, 132).

Third, this high rate of household dissolution does not seem to undermine people’s desire for family life. To live with another person on a stable basis and at some stage to have children is still seen as natural; the nuclear family is a powerful myth within the collective imagination. What is new is that splitting up and remarrying is also normal. So the remedy for the so-called crisis of the family is the family! People live in a frenzy of love, in what is called the ‘normal chaos of love’ (Beck and Beck-Gernsheim 1995). Giddens argues that the family is being recovered as a pure relationship in a democracy of contingent love (1992). It is the romantic complex of ‘forever’ and ‘one-and-only’ qualities with which Giddens contrasts his notions of ‘pure relationships’ and ‘confluent love’. ‘Pure love’ is lived out in impure families. Such relationships exist because of love, and if they do not deliver emotional satisfaction, they break up:

The general diagnosis is that people’s lives are becoming more mobile, more porous, and of course more fragile. In the place of pre-given and often compulsory types of relationship is appearing ‘until the next thing’ principle, as Bauman calls it, a kind of refusal of lifelong plans, permanent ties, immutable identities ... Instead of fixed forms, more individual choices, more beginnings and farewells. (Beck-Gernsheim 2002, 123)

Thus it is said that the family is becoming individualized, part of a wider individualization of ‘reflective modern societies’.

However, some researchers contest this individualized version of family life, partly because it can be apocalyptic: ‘One can, it seems, begin to predict the growth of societies where kinship networks cease to exist, where few couples will commit to each other beyond a few years, where children who have experienced their parents’ divorce become deeply ambivalent about marriage, and where there is almost frenetic emotional mobility and only fleeting, serial relationships’ (Smart and Shipman 2004, 493). Mason argues that the ‘individual, reflexive author’ is the reality of only ‘a highly privileged minority of white middle class men, apparently unencumbered by kinship or other interpersonal commitments’ (2004b, 163). The ‘individualization thesis’ is said to overlook how commitments and obligations continue within families and keep them ‘tied together’, not least when (small) children are involved. In her study of personal narratives about residential histories in the North-West of England, Mason shows that social identity and agency are relational rather than individualized concepts:

When the people in our study talked about where they had lived and why, they talked about relationships with other people, especially family and kin, but also friends, neighbours and sometimes colleagues and workmates. Indeed their discussions of context, contingency, constraint and opportunity were themselves highly relational in that they were grounded
in and spoke of changing webs of relationship and connection rather than any kind of
strategic individualism or motivation. (2004a, 166–7)

Similar relational narratives are to be found in Hammerton’s study of how the
post-war generation of British working-class immigrants to Canada and Australia
constructed their immigration and family stories (2004). The stories told by these
people are partly recollections of the pain and guilt of leaving people behind, of
separating families. Given that money was scarce, long-distance travelling high-
priced, and communication slow and costly, these migrants lost contact with family
and friends back home. While they came to experience relative financial and
professional success, their ‘homesickness’ almost ruined it (2004, 274).

Moreover, modern families in the UK are often comprised of migrants and mixed-
race families. The number of international migrants worldwide doubled between
1960 and 2000 (UNDP 2004, 87). The migration literature shows that migration is
rarely an isolated decision pursued by individual agents but rather a collective action
involving families, kinships and other communal contacts. Migrants travel to join
established groups of settlers who provide transnational arrangements for them in
receiving countries, while simultaneously retaining links with their country of origin
and with chains of other immigrants (Goulborne 1999; Salaff, Fong and Siu-Lin

So migration disperses family members and friends across vast areas and thus the
intimate networks of care, support and affection — effectively social capital — stretch
over large geographical distances (Chamberlain 1995). Scholars of kinship and
migration have long known that presence and absence — or proximity and distance
— do not necessarily conflict. Thus ‘geographical proximity or distance do not
correlate straightforwardly with how emotionally close relatives feel to one another,
nor indeed how far relatives will provide support or care for each other’ (Mason
2004a, 421; see also Mason 1999). Indeed intimacy and caring can take place at-
a-distance, through letters, packets, photographs, emails, money transactions,
telephone calls and recurrent visits. So, caring, obligations and indeed presence do
not necessarily imply co-presence or face-to-face proximity; people can be near, in
touch and together, even when great distances tear them physically apart. As Callon
and Law maintain more generally, ‘presence is not reducible to co-presence … co-
presence is both a location and a relation’ (2004, 6, 9).

These various studies show that most people’s biographies and mobilities are
relational, connected and embedded rather than individualized. They are, though,
individualized in the sense that each person’s networks and relations are specific
to that individual (see above). People are enmeshed in social dramas that have
social and emotional consequences. Networks both enable and constrain possible
‘individual’ actions. This is the case not only for people in relationships and families
but also for ‘singles’ that increasingly form tight-knit groups of friends where care
and support flourish, according to Watters in Urban Tribes (2004; see also Weston
1991, as well as much of the research reported below).

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**Conclusion**

In this chapter we examined various ways of analysing social networks in the modern
world. We reviewed the social capital, social network and small worlds approaches.
We then outlined a mobilities approach to such topics. We went on to examine
some studies — mainly in the UK — that reveal the importance of social networks
within work and family life. Such networks vary significantly, depending in part
upon people’s travelling and communications practices that sustain the weak and
strong ties within and across networks. We also saw that more or less all networks
depend upon intermittent meetings involving travel and communications by some or
all participants. Meetings central to networks can be costly in terms of time, money
and effort, as we explore in detail in the next chapter.