

An egocentric network tale: comment on Bien *et al.* (1991) *

Barry Wellman

Centre for Urban and Community Studies, University of Toronto, Toronto, Ontario, Canada

The record is set straight as to who did what in the earlier days of egocentric network analysis – Toronto style.

Prologue

“My, my, a priority controversy”, wrote Charles Tilly (1991) when I asked him to reminisce. “It was fun to see you straightening out the record on survey sampling of egocentric networks.”

It *has* been fun writing this. What began as a simple correction of an error has evolved into a memoir – the kind of thing folks talk about late at night at Sunbelt Social Network conference parties.

Just what was said

My thoughts were stimulated by the comments of Bien *et al.* in *Social Networks* (1991: 77): “Egocentered networks were first introduced by Shulman (1972)”. Bien *et al.* go on to explain their reasoning for their

Correspondence to: B. Wellman, Centre for Urban and Community Studies, University of Toronto, Toronto, Ontario, Canada, MSS 2G8.

* I am grateful for comments on an earlier draft by Donald Coates, Linton Freeman, Charles Kadushin, Norman Shulman, Charles Tilly and Beverly Wellman. Preparation of this paper has been supported by research grants from the Social Science and Humanities Research Council of Canada and the University of Toronto. My thanks to Milena Gulia for preparing the references. I dedicate this paper to Donald Coates and Charles Tilly.

statement in a curious footnote: "Kadushin (1989) mentioned Shulman in a citation of Wellman *et al.* (1988)".

Later in the same paragraph, Bien *et al.* appear to contradict their awarding of priority to Shulman by noting: "On the other hand, in the Detroit Area Study 1965-1966 an instrument similar to egocentered network study was used (Laumann 1973); here 1013 persons were asked for their three closest friends". It's time to sort things out!

The paper Bien *et al.* cite as the basis for their attribution tale was Kadushin's (1989) keynote address at the 1988 Sunbelt Social Network conference. It was an after-dinner speech where we expect people to be wise but not totally accurate. Here's Kadushin's flattering, but misleading, remark as published in *Connections* (1989: 18):¹

Then there was the great invention by a Toronto team (Wellman himself assigns credit to Shulman, 1972) of the sample survey research ego-centered network system. I rank the invention of this method as close to the invention of sociometry as generative of both empirical studies and theoretical problems.

Note that despite Bien *et al.*'s assertion, Kadushin actually cites me personally and not Wellman *et al.* (1988). In fact, Wellman *et al.* (1988) never cites Shulman although other papers of mine do.

Kadushin recently recalled (1991) getting information from me about the origins of ego-centered network analysis in response to "some early (late 1970s) inquiries and your old paper on networks and cities circa 1978 [probably Craven and Wellman 1973] in which you referred to Shulman for your proposed ego network method, but not to others".

My defense to Kadushin's recollections of my response to his 1980-ish inquiries is similar to that commonly used in slander suits: I didn't say it. If I did say it, it was misunderstood. If I did say it and I wasn't misunderstood, I didn't mean it. In any event, I was not sober at the time.

What of the published statement in Craven and Wellman (1973)? Sure enough, Norman Shulman's 1972 doctoral thesis at the University of Toronto is cited (p. 62) as a then-recent use of the 'personal-network approach' along with Jack Wayne's Toronto thesis (1971), Edward Laumann's book (1973), Charles Tilly's program piece (1973),

¹ I had stopped editing *Connections* by this time.

and some works of my own (1971, 1972a, 1972b). However, Craven and Wellman did not trace the origin of ego-centered networks because we didn't think at the time that anyone would care.

There is enough published confusion floating around that I should sober up and correct the record. I suspect that now my origin tale will be of more than egocentric interest, as egocentered network analysis has become widely used in studying community, kinship, social support and personal relationships.²

Harvard days

My Toronto work grew nicely out of my graduate student experience at Harvard. Network thinking was flourishing there under Harrison White and Charles Tilly, and categorical thinking was ossifying into little boxes labelled A, G, I and L. All graduate students and teaching fellows working with Harrison White had to read and meditate on Elizabeth Bott's pioneering work (1957) - it was a key part of White's introductory sociology course. Bott had collected egocentered kinship network data on British families and calculated the first network density measures. She also had the good sense - which we did not in the East York study - to look at the networks of husbands and wives in the same household.³ However, Bott had looked only at kinship networks, and she did not provide information about tie or network variables other than density.

There were others looking in some way at community networks, such as Linton Freeman studying power in Syracuse (1968) and Clyde Mitchell studying migration in southern Africa (1969). I especially remember Charles Kadushin's 1966 paper on the 'friends and supporters of psychotherapy', an application of Simmelian ideas (e.g.,

² For literature reviews of community and social networks, see Wellman (1982, 1988); for kinship, see Wellman (1990); for reviews of social support, see Wellman (1992b); for links to studies of personal relationships, see Wellman (1992a).

³ Beverly Wellman and I (Wellman and Wellman 1992) have finally gotten around to relating marital relations and network relations among the East Yorkers. Our Toronto data shows much different dynamics than Bott's data from 1950s England. In Toronto, couples act more-or-less jointly from their household base to relate to kith and kin, while Bott shows that separate kin groups tend to dominate and segregate husbands and wives. We think that part of the reason is the increasing shift of friendship and kinship ties into the household and away from public spaces (see also Wellman 1992b).

1922) to networks of common interest.⁴ For my doctoral thesis, I created a survey schedule that asked Pittsburgh ninth-grade adolescents about their networks (Wellman 1969).⁵

The East York/Toronto studies

What came to be known as the (first) East York study was conceived by Donald Coates (1966), a psychiatrist at the Clarke Institute of Psychiatry, Toronto. Coates believed that psychiatric symptoms were affected by interpersonal relations as well as by the social characteristics (SES, gender, etc.) identified in the famous Midtown Manhattan study (Srole *et al.* 1961). Through conversations with Charles Tilly, newly arrived at the Department of Sociology, University of Toronto in the summer of 1966, Coates developed the idea of asking about interpersonal relations.

Charles Tilly, who came up with several of the East York ideas, started writing in 1966 about personal community networks: tightness of boundary, intersection, differentiation, density and knit (Tilly 1991). His working paper went through several revisions and expansions at the University of Toronto, the Center for Advanced Study in the Behavioral Sciences (Palo Alto), and the University of Michigan (1970). Parts of it appeared in the introductory sections of the urban reader Tilly edited in 1974.

I followed Tilly up from Harvard to Toronto in the summer of 1967 to work with Donald Coates on the East York study and to be an Assistant Professor of Sociology.⁶ I was principally responsible for

⁴ All the players, of course, have their own origin tales. Kadushin (1992) has written to correct my endemic Harvard bias by pointing out the important proto-network tradition at Columbia's Sociology Department, starting in the 1950s, including Merton's ongoing Simmel seminars, the personal influence studies of consumer purchases and voting behavior, his own social circle and elite studies (see Barton, *et al.* 1973; Kadushin 1969, 1974):

First Yugoslavia, then the world! The same personal influence plus social circle model was followed - except here, among elites, the circles turned back upon one another and the people mentioned could be found and interviewed. That was, for me, the whole point of studying elites. They were enough of a community so that one could study the networks between them without using pseudo network data.

⁵ These network data were never analyzed as I had enough material for my thesis without them.

⁶ That's how recruiting was done in those days in old-boy Toronto.

designing the sociological aspects of the questionnaire. I worked closely with Coates and our research assistants,⁷ and we consulted often with Tilly and Norman Bell.⁸ I took special responsibility for the conceptual and methodological development of the sociological sections, including those asking in detail about relations with kin, friends, neighbors and coworkers (Wellman 1968). Tilly recalls (1991) that in the academic year 1967-1968 he, Coates and I were the principal developers of this first systematic survey of ego-centered networks. "I think the original idea that Kadushin likes so much came out of those meetings, and that you were chiefly responsible for it" (Tilly 1991).

Our Toronto research group conceived the idea of asking the respondents for information about each network member separately and of not restricting our analysis to only those network members with specific types of role relationships (e.g. kin or neighbors) or specific social characteristics (e.g. men). To measure density, we asked the respondents if each network member was socially-close with each of the others. We capped our information at six socially close 'intimates' (as we later came to call them) for two reasons: A pilot study showed that few people had more than six intimates, and budgetary constraints meant that we could not afford to ask about more relationships. We also accepted the respondents' reports about their network members because we could not afford to interview the 3930 network members named.

We prepared and tested the East York survey, 1967-1968, and we did the full study in 1968 with 845 respondents. Most of the survey was closed-ended, face-to-face interviewing, but there were a few open-ended questions, and an on-the-spot, self-administered questionnaire for delicate personal matters. Our group wrote a few early working papers,⁹ and we soon published a paper describing the study (Coates *et al.* 1969). Indeed, this large data-set is still being analyzed and written-up (e.g., Wellman *et al.* 1991).

⁷ Marian Gillies, Margaret Hewson, Frank Maidman, Sharon Moyer and James Turk.

⁸ Bell also was at the Clarke and Sociology, specializing in psychiatric and family matters. At that time, he was mounting a study of domestic dynamics in East York that was intended to parallel ours.

⁹ Wellman (1968, 1974); Wellman *et al.* (1969); Community Studies Section (1970); Wellman *et al.* (1971, 1974).

It is sad that the psychiatric data never were connected with the social network data. Donald Coates moved to Vancouver soon after the data were collected and developed other interests.¹⁰ I found a supportive home at the Centre for Urban and Community Studies, University of Toronto. One of the nice spin-offs from preparing this memoir is that Coates and I have reconnected, and we are planning to 'finally' link the psychiatric and network data.

At the Centre for Urban and Community Studies, my students and I wrote more papers, developing the concepts of the *community question*, *personal community networks*, the *network city*, and *community liberated*.¹¹ We did *tie-wise* analyses – in which all 3930 relationships of focal persons are treated as a large sample (Wellman 1979) – and *net-wise* analyses – in which each of the 845 networks is a unit of analysis (Wellman *et al.* 1974, 1991; Wellman 1985). We developed ways of analyzing network composition, heterogeneity and structure. I believe that we were the first to ask in a survey if network members help each other in everyday matters or in emergencies. This has developed into the study of social support.

Of course, we made mistakes in the pioneering East York study. As we assumed that most relationships were globally supportive, we did not inquire into the specific kinds of support that different network members might exchange. We didn't think much about the strength of weak ties (Granovetter 1973). We still thought of community as essentially local – this was the era of Herbert Gans' *Urban Villagers* (1962) and Jane Jacobs' 1961 hymn to New York neighborhoods. We only had one coding category for 'outside of metro Toronto'. We were flabbergasted when about one-quarter of the network members fell into it, and we suffered because we couldn't tell if these network members lived 5 or 5000 miles away. Indeed, much of the motivation for my *second* East York study was an attempt to correct these mistakes (e.g. Wellman 1982, 1992b; Wellman and Tindall 1992; Wellman and Wortley 1990; Wellman *et al.* 1988).

¹⁰ He did produce a basic preliminary account (Coates *et al.* (1976) and a very long summary of a proposed book that is itself filled with findings (Coates, n.d.)

¹¹ Wellman (1971, 1979, 1982); Wellman *et al.* (1973); Craven and Wellman (1973); Gates *et al.* (1973); Wellman and Leighton (1979).

Getting saved and then liberated

The East York study fit nicely with my own lifelong celebration of urban life. Growing up well-connected on the streets of the Bronx, New York City, I took for granted the vibrant nature of urban communities. Studying graduate sociology at Harvard in the late 1960s, Charles Tilly and his students were dismayed at the prevalent 'community lost' ideology of urban scholars.¹²

The East York study provided a chance to document the continuing connectivity of urbanites. It was a reaction against the Community Lost / Red Menace / mass society fears of the 1950s that urbanites were disconnected, lost souls. It resonated nicely with the intrinsic optimism of the 1960s' African-American, student and urban movements that rejected bureaucracies and celebrated the innate goodness and mutual supportiveness of people. We all celebrated Community Saved in the city, in part to reject suburban sterility and in part to promote race relations and rock and roll. Everyone came to San Francisco – and sociology – with flowers in their hair. As we wandered around cities and continents, with Kerouac (1958) and *Europe on \$5 a Day* in our hip pockets, we came to realize that Community had been more than Saved: Community had become Liberated from the traditional boundaries of neighborhood and kinship group.

As I pondered the meaning of what we were finding in East York, I moved away from merely using networks to assert the continuing existence of communities. I realized that if we saw communities as networks, we no longer had to think of them as necessarily bounded by place (neighborhood) or solidary groups (kinfolk). My insight came when I attended a 'save the neighborhood' meeting of the University League for Social Reform. Jane Jacobs (1961) had recently moved to Toronto, and like North Americans everywhere we were working to stop expressways from destroying downtown neighborhoods. The activists at the meeting were a strong, supportive friendship network that was doing a lot of good. People drove in from all over Toronto to meet their friends, drink fine wine, and talk about saving neighborhoods. Their metropolis-wide friendship network was a true community of interest, yet they persisted in seeing the neighborhood as the only possible form of community. When I was asked to write a piece

¹² The other students included Joe Feagin, Nancy Howell [Lee] and Edward Shorter.

celebrating community for the book that came out of this meeting, I wrote the ironically hyperbolic "Who Needs Neighborhoods?" (1971, 1972b) in an attempt to pierce the smug balloon of neighborhood chauvinism.¹³

Norman Shulman

What of Norman Shulman? At the time of the first East York study, he and Jack Wayne (1971) were graduate students at the University of Toronto. Shulman had begun thinking about networks before coming to Toronto. For his M.A. thesis at Carleton University, he had worked with Peter Pineo and Frank Vallee (an old friend of Bott) studying the impact of urban renewal on community:

Community was supposed to be a localized, neighbouring issue. But, ... when I asked about the 'people you're closest to', I got lots of kin and a bit of neighbouring. It was clear to me from that study that 'traditional' conceptual approaches like groups, neighbourhoods, kinship, and the like couldn't cut it when it came to understanding modern 'community' ... So, I arrived back in Toronto (1968) and to the Network study with this in my head. [Shulman 1991]

Shulman made three key contributions to ego-centered network analysis (1972, 1975, 1976a, 1976b).¹⁴ First, he was the first to study change in ego-centered networks by comparing the findings from our first East York study with those he obtained a year later from interviews with a sub-sample of our respondents. Second, he went beyond interviewing only focal persons to also interview some of those whom the focal persons had named as network members. This allowed him to study the extent to which two persons regarded each other as members of their networks. It has also enabled scholars to understand

¹³ At about the same time, Melvin Webber's (e.g. 1964) paeans to California freeways and phones also were celebrating the existence of communities without place – albeit without data or network reasoning. Twenty years later, I am studying electronic mail and videoconferencing as environmentally benign ways of sustaining liberated communities (see Wellman 1987; Mantel *et al.* 1991).

¹⁴ Charles Tilly and William Michelson were his thesis advisors. As a junior faculty member, I got to sit on his thesis examination committee.

the extent of relational symmetry and to assess the validity and reliability of network data that has only been reported by focal persons. Third, Shulman was a pioneer in studying variation in networks over the life-course (1975) and in analyzing specific types of social support (1976).

Shulman became a faculty member at McMaster University after graduation, studying intra-Canadian migration. He later became a senior civil servant for the Canadian and Ontario governments, and he now works with the Industrial Accident Prevention Association.

The Detroit study¹⁵

As Bien *et al.* point out, Laumann (then an Assistant Professor of Sociology at the University of Michigan) had asked male respondents in the 1965–1966 Detroit Area Study about their three closest network members. His work drew in part on an approach originally developed in his Harvard thesis (1966).¹⁶ Although Morris Axelrod¹⁷ had used an earlier Detroit Area Study to obtain summary information about community ties (1956), Laumann's study and our East York study were the first to ask for systematic information about the composition, structure and contents of specific ties. I remember reading Laumann's mimeographed working papers (1969a, 1969b) when they arrived in the late 1960s after our East York study was in the field.

Laumann's work culminated in *Bonds of Pluralism* (1973), still innovative in its use of egocentered network data to study large-scale social structure. Where the East York study was chiefly concerned with the impact of the nature of ego-centered network characteristics on the focal persons at the heart of them, Laumann's genius was to use ego-centered network data to delineate the social integration of a

¹⁵ This account of the Detroit study focuses on its relationship to the Toronto study. Edward Laumann will have to supply the fuller version. Laumann is currently occupied as Provost of the University of Chicago, that university's highest academic position.

¹⁶ The book version was published in 1966. Tilly (1991) recalls that he and Laumann often chatted about their research while they were both at the Joint Center for Urban Studies, Harvard.

¹⁷ Now Professor Emeritus at Arizona State University and the compiler of a comprehensive data base on restaurants in the Phoenix area.

city. It is not trivial that Laumann's book is dedicated to Talcott Parsons and George Homans. Our East York study also differed from Laumann's in that we had information about twice as many intimates 6:3, and our research has shown that the second three are quite different in their characteristics than the three strongest ties (Wellman *et al.* 1973, Wellman 1979). Claude Fischer and associates later reanalyzed the Laumann DAS data (1977) to address questions about the persistence and transformation of urban communities.

Epilogue

As best as I can see, ego-centered network analysis began with Bott. But this is mostly a Toronto-centric tale with Cantabrigian precursors. Without going back to the ghosts of Simmel and Durkheim, it features:

- George Homans and Talcott Parsons, both eager to link interpersonal relations with social structure, and big questions with good data.
- Harrison White and Charles Tilly, rising, young-ish Harvard stars in the mid-1960s: White consciously developing a network analytic paradigm, and Tilly showing how networks structure communities.
- Chronologically, Edward Laumann, Barry Wellman, Mark Granovetter and, later, Claude Fischer as eager graduate students of the generation that was first able to link the Harvard tradition of asking big questions to the Data Text/SPSS/SAS tradition of complex number crunching.
- Norman Shulman, as a Toronto graduate student of three Harvard emigres, doing the first longitudinal and two-sided study of ego-centered networks.
- Donald Coates being on the first on the block to link psychiatric concerns with social network data.

It is unfortunate that Bien *et al.* were not able to read Shulman or Wellman before setting forth their version of the origin tale, and I will try to be sober when I talk with Kadushin again. However, I am delighted that they have created this opportunity for nostalgia. Bev

Wellman and I have just been to the marriage of Charles and Louise Tilly's youngest daughter. I first met the Tillys and network analysis when she was born.

It is nice to see how well the ego-centered network idea has developed world-wide. I am now writing and editing books on this subject for Westview Press. My main sadness is that many social support researchers in the fields of the sociology of health and social psychology persist in using social networks as a metaphor only.

References

- Axelrod, Morris
1956 "Urban structure and social participation." *American Sociological Review* 21 (1): 13-19.
- Barton, Allen, Bogdan Denitch and Charles Kadushin
1973 *Opinion-Making Elites in Yugoslavia*. New York: Praeger.
- Bien, W., J. Marbach and F. Neyer
1991 "Using egocentered networks in survey research." *Social Networks* 13: 75-90.
- Bott, Elizabeth
1957 *Family and Social Network*. London: Tavistock.
- Coates, D.B.
1966 "Proposal for a community study project (Yorklea Project)." Toronto: Clarke Institute of Psychiatry.
- Coates, D.B., S. Moyer and B. Wellman
1969 "Yorklea study: Symptoms, problems and life events." *Canadian Journal of Public Health* 60: 471-481.
- Coates, D.B., S. Moyer, L. Kendall and M.G. Howat
1976 "Life-event changes and mental health," in: Irwin Sarason and Charles Spielberger (eds.), *Stress and Anxiety*, vol. 3, New York: Halstead Press, pp. 225-250.
- Community Studies Section
1970 *Yorklea Social Environment Survey Research Report*. Toronto: Clarke Institute of Psychiatry.
- Craven, Paul and Barry Wellman
1973 "The network city." *Sociological Inquiry* 43: 57-88.
- Fischer, Claude, Robert Max Jackson, C. Ann Steuve, Kathleen Gerson, Lynne McCallister Jones, with Mark Baldassare
1977 *Networks and Places*. New York: Free Press.
- Freeman, Linton
1968 *Patterns of Local Community Leadership*. Indianapolis, IN: Bobbs-Merrill.
- Gans, Herbert
1962 *The Urban Villagers*. New York: Free Press.
- Gates, Albert S., Harvey Stevens and Barry Wellman
1973 "What makes a 'good neighbor'?" Paper presented to the annual meeting of the American Sociological Association, August, New York.
- Granovetter, Mark
1973 "The strength of weak ties." *American Journal of Sociology* 78: 1360-1380.

- Jacobs, Jane
1961 *The Death and Life of Great American Cities*. New York: Random House.
- Kadushin, Charles
1966 "The friends and supporters of psychotherapy: On social circles in urban life." *American Sociological Review* 31: 786-802.
1969 *Why People Go to Psychiatrists*. New York: Atherton.
1974 *The American Intellectual Elite*. Boston: Little, Brown.
1989 "The next ten years." *Connections* 12: 12-23.
1991 Electronic mail message to Barry Wellman, 3 October.
1992 Electronic mail message to Barry Wellman, 15 April.
- Kerouac, Jack
1958 *On the Road*. New York: Viking Press.
- Laumann, Edward
1966 *Prestige and Association in an Urban Community*. Indianapolis: Bobbs-Merrill.
1969a "Friends of urban men: An assessment of accuracy in reporting their socioeconomic attributes, mutual choice, and attitude agreement." *Sociometry* 32: 54-69.
1969b "The social structure of religious and ethnoreligious groups in a metropolitan community." *American Sociological Review* 43: 182-197.
1973 *Bonds of Pluralism: The Forms and Substance of Urban Social Networks*. New York: Wiley.
- Mantei, Marilyn, Ronald Baecker, Abigail Sellen, William Buxton, Thomas Milligan and Barry Wellman
1991 "Experiences in the use of a media space," in: *Reaching Through Technology: CHI'91 Conference Proceedings*, Reading, MA: Addison-Wesley, pp. 203-208.
- Mitchell, J. Clyde
1969 "The concept and use of social networks," in: J. Clyde Mitchell (ed.), *Social Networks in Urban Situations*, Manchester: Manchester University Press, pp. 1-50.
- Shulman, Norman
1972 *Urban Social Networks*. Doctoral dissertation, Department of Sociology, University of Toronto.
1975 "Life-cycle variations in patterns of close relationships." *Journal of Marriage and the Family* 37: 813-821.
1976a "Network analysis: A new addition to an old bag of tricks." *Acta Sociologica* 19: 307-323.
1976b "Role differentiation in urban networks." *Sociological Focus* 9: 149-158.
1991 Letter to Barry Wellman, December 11.
- Simmel, Georg
1922 [1955] "The web of group affiliations," in: *Conflict and the Web of Group Affiliations*, Glencoe, IL: Free Press, pp. 125-195.
- Srole, Leo, Thomas Langner, Stanley Michael, Price Kirkpatrick, Marvin Opler and Thomas Rennie
[1961] 1975 *Mental Health in the Metropolis*, 2 vols. New York: Harper and Row.
- Tilly, Charles
1970 "Community: city: urbanization." Ann Arbor: Department of Sociology, University of Michigan.
1973 "Do communities act?" *Sociological Inquiry* 43 (Dec.): 209-240.
1974 (ed.), *An Urban World*. Boston: Little Brown.
1991 Letter to Barry Wellman, October 6.
- Wayne, Jack
1971 *Networks of Informal Participation in a Suburban Context*. Ph.D. Thesis, Department of Sociology, University of Toronto.

- Webber, Melvin
1964 "The urban place and the nonplace urban realm," in: Melvin Webber et al. (eds.), *Explorations into Urban Structure*, pp. 79-153. Philadelphia: University of Pennsylvania Press.
- Wellman, Barry
1968 "Community ties and mental health." Working Paper. Toronto: Clarke Institute of Psychiatry, August.
1969 *Social Identities and Cosmopolitanism among Urban Adolescents*. Ph.D. Thesis, Department of Social Relations, Harvard University.
1971 "Who needs neighbourhoods?," in: James Draper (ed.), *Citizen Participation: Canada*, Toronto: New Press, pp. 282-287.
1972a "Community ties and support systems." Working Paper, Centre for Urban and Community Studies, University of Toronto.
1972b "Who needs neighbourhoods?," revised version, in: Alan Powell (ed.), *The City: Attacking Modern Myths*, Toronto: McClelland and Stewart, pp. 94-113.
1974 "The form and function of future communities," in: Larry Bourne et al. (eds.), *Futures for Central Canada*, Toronto: University of Toronto Press, pp. 301-313.
1979 "The community question." *American Journal of Sociology* 84: 1201-1231.
1982 "Studying personal communities," in: Peter Marsden and Nan Lin (eds.), *Social Structure and Network Analysis*, Beverly Hills, CA: Sage, pp. 61-80.
1985 "Domestic work, paid work and net work," in: Steve Duck and Daniel Perlman (eds.), *Understanding Personal Relationships*, London: Sage, pp. 159-191.
1987 "Models of community, models of humanity: Coming to terms with computerized conferencing." Second Guelph Symposium on Computer Conferencing, June.
1988 "The community question re-evaluated." In: Michael Peter Smith (ed.), *Power, Community and the City*, Brunswick, NJ: Transaction Books.
1990 "The place of kinfolk in community networks." *Marriage and Family Review* 15: 195-228.
1992a "Which types of ties and networks give what kinds of social support?," in: Edward Lawler, Barry Markovsky, Cecilia Ridgeway and Henry Walker (eds.), *Advances in Group Processes*, Vol. 9, Greenwich, CT: JAI, pp. 207-235.
1992b "Men in networks: Private communities, domestic friendships," in: Peter Nardi (ed.), *Men's Friendships*, Newbury Park, CA: Sage, pp. 74-114.
- Wellman, Barry and Marilyn Whitaker
1974 "High-rise, low-rise: The effects of high-density living." Ottawa: Urban Affairs Canada. Paper B.74.29.
- Wellman, Barry and Barry Leighton
1979 "Networks, neighborhoods and communities." *Urban Affairs Quarterly* 14: 363-390.
- Wellman, Barry and Scot Wortley
1990 "Different strokes from different folks: Community ties and social support." *American Journal of Sociology* 96: 558-588.
- Wellman, Barry and David Tindall
1992 "Reach out and touch some bodies: How social networks connect telephone networks," in: George Barnett and William Richards Jr. (eds.), *Advances in Communication Networks*. Norwood, NJ: Ablex, forthcoming.
- Wellman, Beverly and Barry Wellman
1992 "Domestic affairs and network relations." *Journal of Social and Personal Relationships* 9: 385-409.
- Wellman, Barry, Margaret Hewson and Donald Coates
1969 "Primary relationships in the city." Paper presented at the annual meeting of the Canadian Sociology and Anthropology Association, June.

- Wellman, Barry, Peter Carrington and Alan Hall
1988 "Networks as personal communities," in: Barry Wellman and S.D. Berkowitz (eds.), *Social Structures: A Network Approach*, Cambridge: Cambridge University Press, pp. 130-184.
- Wellman, Barry with Paul Craven, Marilyn Whitaker, Sheila du Toit and Harvey Stevens
1971 "The uses of community." Working Paper No. 47. Toronto: Centre for Urban and Community studies, University of Toronto.
- Wellman, Barry with Paul Craven, Marilyn Whitaker, Sheila du Toit, Harvey Stevens and Hans Bakker
1973 "Community ties and support systems, in: Larry Bourne, Ross MacKinnon and James Simmons (eds.), *The Form of Cities in Central Canada*, Toronto: University of Toronto Press, pp. 152-167.
- Wellman, Barry, Norman Shulman, Jack Wayne, Deborah Tannenbaum, Albert S. Gates and Associates
1974 *Urban Connections*. Final report of the Community Ties and Support Systems project to the Ontario Department of Health, Laidlaw Foundation and Canada Council. Toronto: Centre for Urban and Community Studies, University of Toronto.
- Wellman, Barry, Ove Frank, Vicente Espinoza, Staffan Lundquist and Craig Wilson
1991 "Integrating individual, relational and structural analysis." *Social Networks* 13: 223-250.