

Tit-for-Tat and All That: Reciprocity in East York in the 1970s

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This web paper expands and synthesizes: Côté, Plickert and Wellman (2007) and Plickert, Côté and Wellman (2007)

Abstract

Reciprocity – doing for others if they have done for you – is a key way people mobilize resources to deal with daily life and seize opportunities. In principle, reciprocity (the Golden Rule) is a universal norm. In practice, it is variable. Personal networks rarely operate as solidarities and as such, people cannot count on all the members of their networks to provide help all the time. We use random-sample survey data from the second East York study to provide the first analysis of the likelihood that social support will be reciprocated with either a similar or a different kind support. We also investigate how the nature of individual, relational and network attributes affect the likelihood of reciprocity.

Our evidence is clear: the principal cause of reciprocity is giving support. People are most likely to exchange the same kinds of social support with each other (*tit-for-tit*). In addition, tie characteristics, such as the tie strength and the frequency of contact, are important for the initial giving of support. They set the exchange in motion, with the Golden Rule coming into play thereafter for the exchange of emotional support and minor services. By contrast, there is little evidence of reciprocity in the provision of major services because of the large expenditures of time and money they entail. To some extent, people also exchange different kinds of support (*tit-for-tat*): People who provide minor services are more likely to exchange emotional support. Other variables that affect reciprocity are gender, age, role relationship, and the size of networks. For example, larger networks have more reciprocal emotional support. And, being a neighbour, a friend, a parent or an adult child is associated with reciprocally receiving minor services, while being a neighbour, a parent or an adult child is associated with reciprocally receiving major services.

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Does the Golden Rule, Rule?

What goes around comes around, we learned as children on the streets of New York, Saskatoon and Berlin.

Where were you when we needed you? we thought when others did not repay the help we had given to them.

Reciprocity – doing for others what they have (or would) do – is a key way people mobilize resources to deal with daily life and seize opportunities. Such exchanges are the key to obtaining network capital that can provide helpful resources that are flexible, efficient and effective.²

In principle, reciprocity is a universal norm. In practice, it is variable. Reciprocity varies in *content*: people exchange emotional and material aid, information and companionship. It varies in *specificity*: exchanges can be of the same resource – a hug for a hug – or of different resources – a hug for help with childcare. It varies in *immediacy*: compare two people exchanging support with adult children giving eldercare to aged parents who provided childcare decades ago. It varies in *directionality*: support sometimes flows only in one direction rather than reciprocally; It varies in *tie or network focus*: exchanges can reciprocate between two persons or move indirectly through the social network in which their tie is embedded.

The loosely coupled networked nature of contemporary society means that social support does not come reliably from one group. Rather, it comes contingently from a variety of ties and networks. People navigate nimbly through partial involvements in multiple networks, giving and getting network capital (Wellman and Leighton 1979; Wellman 1999, 2001; Kadushin 2004). Because personal networks rarely operate as solidarities, people cannot count on all the members of their network to provide help all the time. People exchange different types of help based on their relationships. For example, emotional support is best accessed through friends and family (Wellman 1992) while job leads typically come from acquaintance networks and business contacts (Granovetter 1973, 1995; Moerbeek, Flap and Ultee 1995).

This shift from groups to networks has also had implications for the mobilization of social capital. The traditional notion of social networks and social capital is that people observe and support each other by walking door-to-door – or at most traveling short distances. But what if the ground is shifting under people's feet so that most of their ties are no longer in their vicinity? That was already the situation in the 1960s and 1970s when modern social network research began in North America. It is even more so in the twenty-first century with the internet maintaining many friendship and kinship ties over long distances (Wellman 2001). It is not that neighbourhood ties have died; it is just that they no longer dominate most personal networks.

As the neighbourhood and village become only one of several foci of interaction, reciprocity has become less rooted in the social control and rewards of the group and more a product of trust within ties. Tie attributes such as proximity, frequency of contact between exchange partners, role relationship, and tie strength can mediate the reciprocal provision of social support. So can the personal characteristics of individuals – the resources available to them – and networks in which these ties are embedded. These factors play a significant role in how reciprocity occurs and help to foster trust among network members before the exchanges take place.

This shift from groups to networks may also entail more differentiated ties. Even villages have differentiation, but the more complex and sparsely knit networks of modern urbanites probably have a greater variety of role relationships. Not all ties are supportive, and not all supportive ties provide the same kinds of resources (Pahl 1982; Wellman and Wortley 1989, 1990; Wellman 1992). This shift to a

² Network capital is a resource embedded in a person's social network and accessed through network ties. This type of social capital often can provide custom-tailored helpful resources that are flexible, efficient and effective. (Wellman and Frank 2001; Lin 2001; forthcoming).

network society evokes the question of how people obtain resources through interpersonal relationships. If group-based community is declining, are network-based relationships taking their place (Wellman 1979, 2001; Wellman and Leighton 1979; Castells 2000)?

Because most research has studied the one-way flow of resources, we do not know in any systematic way about how or why people reciprocate. For example, we do not know whether people who receive emotional support are more likely to give back emotional support in return or whether they are likely to provide a minor service instead. We use survey research to understand the variable and contingent nature of reciprocity and inquire about the kinds of resources exchanged between people. We investigate the extent to which interpersonal ties, network characteristics, and people's personal characteristics (e.g., gender) affect the nature of reciprocal relationships. The questions we address are:

- From whom do people obtain reciprocal support?
- What kinds of supportive resources do they give and get in return?
- To what extent is the supportiveness of others associated with our own supportiveness – in specific exchanges of the same kind of resource or in the exchange of other kinds of resources?

Despite the importance and contingency of reciprocity, these questions have not been addressed in multivariate analyses that tease out which characteristics of people and their relationships are associated with reciprocity. We start the process, using evidence from a Toronto study of social networks and social support to identify what kinds of reciprocal support are available from whom and in which kinds of relationships.

Precepts of the Sages

The consequences of reciprocity go beyond the specific resources exchanged. With reciprocity, network capital multiplies in positive feedback cycles. What goes around comes around: Helpfulness stimulates further helpfulness, encouraging social bonds. They are activated more frequently, convey more resources and perhaps even a wider variety of resources. The increased surety of support lowers the transaction costs so there is less searching for resources, more mutual awareness of needs and resources, and less wondering if promised help will actually be delivered. If reciprocal support operates within groups, social cohesion increases. If it crosses group boundaries, social inclusion expands in scope and societal integration increases (Gouldner 1960). Thus, reciprocity can help to initiate and maintain interactions between individuals (*starting*) as well as to provide a mechanism to ensure that the exchanges remain balanced and even (*stabilizing*).

Sages worldwide have prescribed reciprocity as a guide to moral and ethical behaviour. A few millennia after Cain's immortal question, "Am I my brother's keeper?" [Genesis 4:2] Jesus taught the essence of reciprocity, known as The Golden Rule:

Do unto others as you would have them do unto you. [Matthew 7:12].³

Such norms are not limited to western traditions, although the thought is often expressed negatively as harm reduction rather than in positive helpfulness. For example, the Hindu epic, the *Mahabharata*, written in about 1000 BCE, says:

This is the sum of duty: Do naught unto others that would cause you pain done to you.

Five hundred years later, Confucius wrote:

Do unto another what you would have him do unto you, and do not do unto another what you would not have him do unto you. Thou needest this law alone. It is the foundation of all the rest.

³ All Biblical quotations have been translated by Logue (2002)

And the Prophet Muhammad had similar sentiments in about 600 CE:

No one of you is a believer until he desires for his brother that which he desires for himself.
(Hadith recorded by al-Bukhari)

Perhaps the strongest expression of altruistic reciprocity is found in the Talmud whose sages teach that the highest blessing is to help someone without expecting anything in return, even self-satisfied *naches* (feeling good about doing good; Rosten 1999). The sages preach normatively altruistic *reciprocity*: providing support without expectation of immediate reward. If all so acted, support would be in the air, and reciprocity would be a given, rather than a variable.

Sociologist Alvin Gouldner (1960) summarizes this line of thought as “the norm of reciprocity”:

People should help those who have helped them and people should not injure those who have helped them.

Yet, not all reciprocity is driven by altruistic norms. Self-interested reciprocity helps others with the expectation of being helped in return. For example, gift giving can increase access to social networks, creating new ties by allowing people to connect through a series of exchanges (Gouldner 1960; Sahlins 1965, 1972). Helping others also develops a reputation as a helpful person. When needing help in return, others may be forthcoming. For example, participants in online listservs and chat groups often provide help. Even if the online request is to an online group and not to a specific person, as far as the recipient of the request knows, s/he may be the only one available who could provide help. Yet such on-line assistance will be observed by the entire online group and may well lead to reciprocal help from group members (Kollock and Smith 1996). There is often mutual advantage in such reciprocity, with the support-givers, the enviroing network and perhaps the broader society gaining. As Hilary Clinton (1996) and a (possibly-African) adage have pointed out, “it takes a village [i.e., or a network] to support a child” (Cowen-Fletcher 1995: H-Africa 1996).

Suggestions of Self-Interest

The sages preach normatively driven reciprocity: providing support without the expectation of immediate reward. If all so acted, support would be in the air, and reciprocity would be a given, rather than a variable.

Yet only the saints and sages would persistently help others without the expectation that someone would help them in turn. But not all reciprocity is driven by altruistic norms. *Self-interest* is also a factor: helping others on the basis of being helped in return. For example, gift giving can increase network capital and create new ties by allowing individuals to connect to others through a series of exchanges (Gouldner 1960; Sahlins 1965, 1972). In this way, reciprocity becomes a practice by which people cooperate to gain advantage in society.

Most studies of reciprocity find that people will choose cooperative over selfish strategies when given the option (Ostrom 2003). Often, they reciprocate in-kind to what they have been given, in a *restricted (or similar) exchange*. A resource given comes with the understanding that reciprocation will take place within a limited time-frame (Ekeh 1974). The resource (goods and services) given is reciprocated with the same resource, which may also create conditions for future reciprocity and cooperation to occur.

If the resource is beneficial, people may also reciprocate with something else they see as equally beneficial in a *generalized (or mixed) exchange*. Generalized exchange has fewer restrictions than restricted exchange, and is an indicator of interpersonal trust (Gouldner 1960). People do not depend on the immediate reciprocation of resources and exchange one type of resource for a different type.

Another distinction exists – exchange between two persons and exchange within a network. If there is even greater trust within social networks, support may be reciprocated by another individual entirely (Ekeh 1974). This implies a belief in the reciprocating nature of one’s network, or if the Golden Rule is accepted, in humanity as a whole (Yamagishi and Yamagishi 1994; Cook 2004).

Laboratory and Ethnographic Studies of Exchange and Reciprocity

The many experimental and ethnographic studies that have been conducted over the years have helped to inform our survey-based research. Both laboratory and field studies have shown cooperative exchange and reciprocity to be important for the survival of many species: humans, chimps and birds, etc. For example, animal studies have shown reciprocal support among both kin and nonkin (Ridley 1997; Fehr and Rockenbach 2004). Where the possibility of future gain is greatest, cooperative strategies are most frequently used (Sanabria, Baker and Rachlin 2003; Wilkinson 1986). For example, blue jays cooperate to obtain food. Working together enables two jays to obtain a larger, but delayed, reward despite temptations to cheat and get a smaller, immediate reward.

By contrast, some animals use selfish strategies where environmental conditions are such that trust is low as is the possibility of future exchanges (Stephens, McLinn and Stevens, 2002; Hall 2003; Stevens and Hauser 2004; Stevens and Stephens 2004; Wilkinson 1984). As with humans, the jays vary in their likelihood of reciprocal cooperation, with the characteristics of their partners substantially affecting the tendency to reciprocate (Noë 2001; Mesterton-Gibbons and Adams 2002). Chimpanzees also tend towards cooperative strategies to enhance their overall rewards and proactively choose more effective helpers (Melis, Hare and Tomasello 2006). Young chimpanzees, as well as human children, help each other early in life (Warneken and Tomasello 2006). These studies suggest that helping is not only preferred in some cases, but that patterns of cooperative behaviour exist in the young.

Social psychology has a long tradition of analyzing exchange and reciprocity, especially in experimental laboratory situations. Game simulations, such as the “Prisoners’ Dilemma” show that cooperative behaviour is more likely to be used when: (a) sufficient repetitions of successful exchanges have occurred, and (b) adequate time has passed to formulate an opinion about the trustworthiness of the exchange partner (Axelrod 1984; Baker and Rachlin 2001; Buchan, Cross and Dawes 2002; Komter and Volleberg 1997; Molm, Quist and Wiseley 1993; Stephens, McLinn and Stevens 2002; Takahashi 2000).

Such studies show that people who give money to other players do so to the extent that they believe others will reciprocate (Molm, Takahashi and Peterson 2000). Network reciprocity has the best payoff: players who give away half their money (showing unselfish exchange behaviour and trust) usually receive returns in excess of what they gave away (Hoffman, et al. 1998; Kurzban, et al. 2001; Parks and Rumble 2001; Yamagishi and Cook 1993). Where participants have a relaxed accounting system based on trust, network reciprocity strategies are more rewarding than strategies using one-to-one exchanges or selfish strategies that do not involve any exchanges (Braun and Gautschi 2006; Kollock 1993, 1994).

Laboratory experiments focus on salient variables by abstracting them out of real-life situations. Yet experiments can only handle a few variables at a time, isolating the actual processes of exchange from the context of social relationships and structures. In contrast to lab experiments, ethnographers have immersed themselves in the daily lives of communities. At the risk of statistical precision, they have been able to provide a sense of how members of social networks reciprocate.

Ethnographic fieldwork has documented reciprocity in villages and urban neighbourhoods for decades. One English study showed how the exchange of resources in a rural area combines with paid labor to provide different types of reciprocal help (Pahl 1982), while a Chinese study showed the interdependence of villagers during Maoist upheavals in China (Chan, Madsen and Unger 1992). Many urban studies have focused on the heavy use that people in low income neighbourhoods make of reciprocal relationships to supply social support, both in the third world (e.g., Lewis 1961; Peattie 1968; Roberts 1978) and in the developed world (e.g., Young and Willmott 1957; Gans 1962; Liebow 1967; Stack 1974). Other studies have shown how networks provide bypasses around rigid bureaucracies and

relative certainty of supply in anarchic societies.⁴ “Old boy” networks of the connected allow elites to organize and share resources informally and quickly (Unger 2004).

Social Support as Social Capital⁵

When we began this research, we were surprised that we were only able to discover a small number of survey-based studies of exchange and reciprocity. Moreover, those we did find focused on elderly populations or on effects of social support on health.⁶ Yet, survey research brings useful strengths to the study of exchange and support. Both experimental and ethnographic studies work with closed populations: approaches more appropriate to traditional group-based communities (villages, neighbourhoods) than to the far-flung, sparsely-knit social networks that comprise the personal communities of many residents of developed countries (Wellman 2001; Wellman and Hogan 2004). As Karen Cook (2004: 190) argues:

A major difference between life in small isolated communities and that in large complex societies is the declining significance of groups into which one is born and the growing significance of reciprocated choices between erstwhile strangers for human relations, as noted by Peter Blau (2002) in one of the last pieces he wrote before his death. This move from communal norms to networks of association is central to the emergence of modern complex society, and it changes the very nature of the problem of social order.

This shift from groups to networks has major implications for the mobilization of social capital. The traditional notion of social networks and social capital is that people observe and support each other by walking door-to-door – or at most traveling short distances. But people’s ties are no longer local. That was already the situation in the 1960s and 1970s when modern social network research began in North America, and it is even more the situation in the twenty-first century with the internet maintaining many friendship and kinship ties over long distances (Wellman 2001; Hampton and Wellman 2002; Quan-Haase and Wellman 2002; Hogan, Carrasco and Wellman 2007). It is not that neighbourhood ties have died; it is just that they no longer dominate most personal networks.

As the neighbourhood and village have become only one of several foci of interaction (Feld 1981), reciprocity has become less a product of the social control and rewards of the group and more a product of trust within ties. Tie attributes such as proximity, frequency of contact between exchange partners, role relationship, and tie strength can mediate the reciprocal provision of social support. So can the resources available to people and the networks in which their ties are embedded. These factors play a significant role in how reciprocity occurs and help to foster trust among network members before the exchanges take place.

These changes evoke the question of how people obtain resources through interpersonal relationships. Survey-based studies of social support became popular in the 1980s, especially among social psychologists, social workers and community and medical sociologists. Survey research has different

⁴ See Sik and Wellman’s (1999) account of communist and post-communist Hungary; Gold, Guthrie and Wank’s (2003) or Yan (1996) accounts of *guanxi* in contemporary China.

⁵ Scholarship about “social support” and “social capital” are so substantively similar that it is less important to worry about the distinctions between them than to realize that they come out of the different rhetoric of two distinct research traditions. Social psychology, social work and medical sociology talk about “social support” while political science, political sociology, and social network analysis talk about “social capital”. However political scientists also discuss the non-network aspects of social capital in terms of organizational involvement (e.g., Levi 1998; Putnam 2000).

⁶ For studies of reciprocity with respect to caregiving of the elderly, see, for example. Krause and Shaw 2000; Liang, Krause and Bennett, 2001; Morgan, Butler and Schuster 1991; Hamilton and Sandelowski 2003. For studies of the effects of social support on health, see for example Uehara, 1990; Turner and Marino 1994; see also the review in Uchino, Cacioppo and Kiecolt-Glaser 1996).

strengths than focused, decontextualized lab studies of a small set of subjects and sensitizing ethnographic studies of communities. It lends itself to multivariate statistical analysis that allows researchers to tease out the relative effects of variables. It can provide information about how a substantial number of real world phenomena relate to reciprocal exchange. Researchers typically interviewed respondents about the help available from their socially-close ties outside of their households: good friends, immediate kin, active neighbours, etc. At first, studies just asked about help in general (e.g., Wellman 1979), but with experience, researchers began investigating the extent to which different types of relationships (parents, etc.) gave various kinds of support (e.g., Wellman and Wortley 1990; see also the review in Wellman 1992).

Six Big Questions about Reciprocity

Our review of research into reciprocity suggests several big questions:

1. *What kinds of supportive resources are more likely to be reciprocated?* Are different dynamics associated with the reciprocal exchange of different types of resources? For example, reciprocal emotional aid exchanges intangibles while providing major aid for healthcare can entail large commitments of tangible resources.

2. *Does reciprocity restricted to the exchange of similar resources operate differently than the exchange of one type of resource for another kind?* What are the circumstances under which people exchange similar or different things? What characteristics affect the likelihood that these two types of exchanges will occur?

3. *Is reciprocity principally through one-to-one exchanges or more complex flows through networks?* The shift from densely-knit groups to sparsely-knit networks suggests that one-to-one exchanges, more directly enforceable, may well predominate.

4. *Where does reciprocity come from: within the person (both psychological traits and personal characteristics), from the nature of the tie, or from the networks in which the tie is embedded?* Perhaps what appears to be reciprocity is simply that supportive resources often flow in two directions, to and from Person A and Person B. In that case, personal, tie and network characteristics – such as gender, the strength of a relationship and network size – that predict to the one-way provision of support would similarly predict to what appears to be reciprocal exchanges. But different dynamics may be at play with reciprocity, so that some characteristics predict only to one-way support or to reciprocity, but not to both.

5. *Is reciprocity driven more by norms – do the right thing - or by self-interest – do the thing that will help me the most in the long run?*

6. *What are the implications of extensive reciprocity for the mobilization of social support and for the proliferation of social cohesion?*

Our data allow us to address the first two of these six questions. While we have discussed network exchanges in order to provide a comprehensive framework, we regret that we do not have the data to analyze this form of exchange. We analyze only one-to-one exchanges, both restricted to one kind of thing (e.g. emotional support) or mixed (as when emotional support is exchanged for minor services). As such, we provide evidence about what types of goods are exchanged and about which types are more likely to be exchanged for similar and for different types.

Where Does Reciprocity Come From?

The Golden Rule

While our earlier research of the East York community in Toronto has told us about the *one-way* supply of resources between network members, not until we did the present research did we learn anything about who reciprocates with whom for what. Using our knowledge of East Yorkers and their relationships, we investigate the extent to which reciprocity takes place in these networks.

We turn first to the Golden Rule: *Do unto others as you would have them do unto you*. Defined most strictly, this would mean restricted reciprocity: If I give you X, you would give me X back, either because of normative pressure or out of self-interest. In case studies, X could be emotional aid, minor services, or major services. Stated more formally, this is:

Hypothesis 1: People are likely to exchange the same type of resource.

Yet the literature is filled with accounts of generalized reciprocity: people giving some other kind of resource in return for help given. For example, a friend may have lent a supportive ear about family problems for years but receives child care in return.

Hypothesis 2: Giving one type of resource is associated with getting other types of resources in exchange.

Note that Hypotheses 1 and 2 are not mutually exclusive. Reciprocity can entail exchanges of both specific resources and different resources. Our previous research has shown that relational, network and personal characteristics are related to the *one-way* provision of supportive resources that, in turn, can affect reciprocity (Wellman and Wortley 1990; Wellman and Gulia 1999; Wellman and Frank 2001). Hence, it is reasonable to expect that the characteristics associated with one-way provision of resources are also associated with the *reciprocal* provision of resources.

Tie Strength

Do other aspects of a tie, in addition to the Golden Rule, play a role in fostering reciprocity? Tie strength is a good possibility, as a number of relational phenomena are associated with two people having strong ties. Do such strong ties provide more support? This question became prominent with George Homans' (1961) assertion that sentiments of social closeness are associated with supportive interactions. They became even more pertinent when the second East York study – as well as other studies (reviewed in Cheal 1988, Wellman 1999) – suggested that not only are strong ties more likely to be supportive, the relatively small number of strong ties provide much of an East Yorker's supportive resources. Thus, the second East York study found that most strong ties provide small services, emotional support or both. For example, socially close friends – but not socially close kin – were the most important sources of sociable companionship (Leighton 1986; Wellman and Wortley 1990; Wellman and Frank 2001; see also Uehara 1990, 1994, 1995).

Although all of the 11 or so ties in the typical East Yorker network are relatively strong (by comparison to the other 200+ ties in a network), some are stronger than others. For this analysis, we have set up a dichotomous 0/1 differentiation between Strong ties (1) and somewhat less strong but still Significant ties (0). It is based on the interview participants' belief that the relationship is especially socially close; the participants' report that they interact with a network member voluntarily; and the participants' report of multiplex interactions with a network member in more than one social context. As these three variables have approximately equal factor loadings (Wellman and Wortley 1989), we combine them into a single tie strength measure. We define a strong tie as one that has at least two of the attributes of social closeness, a voluntary involvement in the tie, and multiple role relationships (reviewed in Granovetter 1973; Wellman 1992). Given the high performance of tie strength in one-way provision of resources, we expect it to be significantly associated with reciprocal, two-way, resource exchange.

Hypothesis 3: Strong ties increase the likelihood of reciprocal exchange.

Kinship and Friendship

Kinship: There are cultural, structural and biological reasons for kin to be supportive and reciprocating suppliers of social capital. The norm that “blood is thicker than water” idealizes the promotion of family welfare, encourages kin to share resources, urges them to give other kin privileged access to these resources, and celebrates long-term reciprocity (Schneider 1984). Kin are also the most likely network members to be densely interconnected, fostering communication about needs and norms of providing help. Thus, most North Americans distinguish between kin and friends in their expectations for supplying social support, and they also distinguish among types of kin, expecting more from immediate kin (Allan 1979; Farber 1966, 1981; Argyle and Henderson 1985). Our East York research has found three distinct types of kinship roles: *parent-adult child*, *sibling*, *extended kin* as well as roles of *friendship*, *neighbour and workmate*. Affines (in-laws) behave like consanguines. Because much support effectively goes to the household rather than to the person, kin often feel they are supporting their own relatives when they aid in-laws (Goetting 1990).

Although most members of a person’s overall network are friends and acquaintances, kin usually make up a high percentage of strong ties. In general, about half of all socially close ties are kin. *Immediate kin* – parents, adult children, siblings, including in-laws – are more apt to be supportive network members than are *extended kin* - aunts, uncles, cousins, grandparents.

In previous work on these same East York data, hierarchical cluster analysis found that kin differ from friends (and neighbours) in their patterns of support (Wellman and Wortley 1989). *Parent-adult child* ties are the most supportive of all intimate and active ties, providing high levels of major services, financial aid and emotional support (see also Adams 1968; Fischer 1982a, 1982b). Yet some of this support is almost inherently one-way (see also Grundy 2005). Large transfers of money tend to go only in one direction, with parents helping adult children to buy homes but rarely vice-versa. *Siblings* – brothers and sisters – give each other much support, although not as much as parents and adult children. By contrast, *extended kin* who are involved in personal networks rarely provide support.

Friendship: Friends and neighbours comprise nearly half of most ties (Wellman 1979; Wellman and Frank 2001; Fischer 1982b, 1982c; Willmott 1987). Friendship ties are less densely knit and normatively bound than are kinship ties. For better or worse, getting social capital from friends is more problematic than getting it from kin. Whereas people are born or marry into kinship, friendship is more voluntary and often functions as discrete ties outside of bounded groups. The voluntary, one-to-one nature of friendship means that people must maintain their ties actively and be more concerned about reciprocating a friend’s help (Wellman and Wortley 1990; Crohan and Antonucci 1989; Allan 1989; Adams 1990; Adams and Torr 1998; Blieszner 1988).

The East York data shows that while friends provide less variety and quantity of support than parents and children, they are as likely as siblings and much more likely than extended kin to be supportive (Wellman, Carrington and Hall 1988; Wellman and Wortley 1989, 1990). Because friends tend to be most similar in personal characteristics, experiences and values, they also tend to be most effective in providing support that benefit from similar norms and roles. They are the pre-eminent sources of emotional support and information in networks (Miller and Darlington 2002).

Hypothesis 4: Kin are more likely than friends to be reciprocally supportive. Parents and adult children are especially likely to reciprocally exchange major services.

We use dichotomous variables (0, 1) to assess the explanatory effects of Parent-Adult Child relationships, Siblings and Friends.

Proximity, Contact and Neighboring

Do contact and proximity help explain reciprocity? This is a reasonable expectation because contact and proximity foster shared values, increase mutual awareness of needs and available resources, reduce feelings of loneliness, facilitate resource delivery, and encourage reciprocal rounds of resource exchange

(Homans 1961). This should especially be true when the resources exchanged depend on the delivery of goods and tangible services, where sizeable travel effort might deter providing help.

Historically, arguments about contact have assumed the near-identity of neighborhood and community. Yet even before the advantage of the internet, most active ties were long distance ties that were sustained by telephones, cars and planes (Wellman 2001; Hampton and Wellman 2003). At the time of our 1979 East York interviews, about three-quarters of the ties extended beyond the neighborhood, one-third beyond the Toronto metropolitan area, and one-fifth stretching more than 100 miles (160 km). Northern California showed a similar pattern (Fischer 1982a, 1982b). Even poor Americans, presumably with less access to planes and cars, have many long-distance ties (Oliver 1986). Kinship ties have been especially able to endure over long distances because their densely knit structures and normative obligations encourage contact.⁷

Before the internet, distance reduced contact despite the low-cost of long distance phone calls and the availability of cars and good roads. More than half of all face-to-face personal network *contacts* – as contrasted with *ties* – are with neighbours and workmates: people in close, often daily proximity (Wellman 1996). Few network members lived near enough to see each other daily. But quick access by phone and car – even in the pre-internet days when we collected these baseline data – means that it is the metropolitan area, not the neighbourhood that is the limit on face-to-face contact and supplying most goods and services. It is not surprising that emotional support and financial aid are less dependent on proximity as they do not require physical contact to be effective (Mok and Wellman with Basu 2007; Wellman, Carrington and Hall 1988; Wellman and Wortley 1990).

Hypothesis 5: Physical access – in the form of contact, proximity and neighbouring – promotes the reciprocal exchange of services, especially minor services.

We measure contact between the participants and the members of their networks by taking the \log_{10} of the days per year they are in face-to-face and telephone contact. To measure proximity, we use the \log_{10} of the distance (in miles) between the homes of the participants and the members of their networks. We use logarithms because the difference between one and two miles apart is, for example, much greater than difference between living 1,001 and 1,002 miles apart. Neighbouring is measured by a dichotomous (0, 1) variable derived from the participant's report.

Personal Characteristics

The personal characteristics of people, as well as their relationships, can affect the provision of social capital. For example, research supports the popular observation that women give and receive more emotional support than men.⁸ As the saying goes, “women express, men repress”. Women tend to interact “face-to-face” by exchanging emotional support while men tend to interact “side by side” by exchanging goods and services (Perlman and Fehr 1987, p. 21). Indeed, gender is the only personal characteristic that our previous research found to be related to the provision of social support, with women being more supportive than men (Wellman 1985; Wellman and Wortley 1990; Wellman and Frank 2001).

Research has not made clear the impact of *marital status* on support. Two studies have shown that the married give and receive more support (Campbell and Lee 1992; Wellman and Wellman 1992). Their networks are larger, creating the potential for more support from a variety of sources. Yet another study contradicts these findings, showing that unmarried people are more likely to give and receive support

⁷ Keller 1968; Litwak and Szelenyi 1969; Verbrugge 1979; Wellman and Leighton 1979; Wellman and Tindall 1993; Dominguez and Watkins 2003; Oh 2003; Hampton and Wellman 2003.

⁸ See, for example, Kunkel and Burleson 1999; Wellman 1985; Wellman and Wellman 1992; Hogan, Eggebeen and Clogg 1993; Liebler and Sandefur 2002; Sherman, Ward and LaGory 1988; Wright 1989; Moore 1990.

(Liebler and Sandefur 2002).⁹ Age may also be a factor. Research has shown that middle-aged persons have larger networks and also give and receive more support (Campbell and Lee 1992; Haines, Hurlbert and Beggs 1996).

Socioeconomic status can also play a role in the amount of social support exchanged between people. For example, many accounts have shown that poor people rely heavily on interpersonal relationships for their resources. Lacking money or connections to institutional distributions, the poor depend heavily on their friends and relatives. Yet, reliance on interpersonal ties is not limited to the poor. As richer people have more money to give to others, they may be asked to help more often. They also have more awareness of the distribution of social capital in communities and networks (Lin and Dumin 1986; Espinoza 1999). While some studies show that people in higher status positions give and receive more social support (Campbell and Lee 1992; Haines, Hurlbert and Beggs 1996), others show that people of low economic status rely on informal unpaid labor most often for the provision of major and minor services (Pahl 1982). It may well be that both apparently contradictory situations are true, with high-status people more often called on for help and more often supplying it, even though interpersonal help looms larger in the lives of poorer people.¹⁰

Similarities between network members can foster support (Feld 1982; Gibbons and Oik 2003; McPherson, Smith-Lovin and Cook, 2001; Wellman and Gulia 1999; Wellman and Wortley 1990). Analysts point out that people with similar characteristics tend to flock together in strong homophilic relationships. People with more things in common have more opportunities to talk, develop empathetic understandings and friendships, and their relationships often progress to mutual support (Lazarsfeld and Merton 1954; Feld 1981).¹¹

Hypothesis 6: Being female increases the probability of exchanges of emotional support. We measure sex dichotomously: men = 0; women = 1.

Hypothesis 7: As age increases, so to does the likelihood that support will be exchanged. Age is measured as a continuous variable.

Network Characteristics

Exchanges of social support may depend not only on the characteristics of ties but on the nature of the networks in which these ties are embedded. *Size* probably matters, but in which direction? People with larger networks may be more network-savvy, able to garner more ties and a higher proportion of supportive ties. Moreover, larger networks are more diverse; increasing the likelihood that someone in the network will be supportive (Sammarco 2001; House, Umberson and Landis 1988; Hurlbert, Haines and Beggs 2000; Burton et al. 1995; Oxman and Hull 1997; Williams and Dilworth-Anderson 2002).

It is possible that quality compensates for quantity, with members of small networks more apt to pitch in for help, just as small numbers of bystanders are more likely than large numbers to intervene in emergencies (Latané and Darley 1976). Multilevel analysis – such as hierarchical linear modeling – is the best way to study how the characteristics of networks affect the supportiveness of ties embedded in them. Research using the first East York data set (collected in 1968) found that the members of small networks were each more likely to be supportive (Wellman and Frank 2001). Yet the first East York study looked

⁹ Our findings suggest that marital status does not impact the exchange of any form of support in East York. We continue to use marital status as a control variable in our analyses but do not provide a hypothesis to account for the likelihood of an effect.

¹⁰ We do not analyze socioeconomic status (years of schooling, occupational prestige) in the final analysis presented here because preliminary analysis did not show any association with reciprocity or the one-way provision of support.

¹¹ Similarly here, we do not show any association between similarities and reciprocity or the one-way provision of support. Similarities are measured by procedures described in Wellman and Gulia (1999).

only at the five or so strongest ties, and while the second East York data set that we analyze here does contain information about more ties in a network, the sample size of participants is too small for multilevel analysis. However, network-level analysis of these data has shown that larger networks contain a higher percentage of supportive ties (Wellman and Gulia 1999).¹²

Hypothesis 8: Ties in larger networks will be more likely to reciprocate. Network size is the simple count of all active members in the participants' network.

Studying Supportive Relationships in East York

Interviewing East Yorkers

Our data come from interviews conducted in 1977 - 1978 in the East York section of Toronto. Although the data are not new, they have the benefit of being well-studied and validated by research elsewhere (Wellman 1985, 1999; Wellman, Carrington and Hall 1988; Wellman and Wortley 1989, 1990; Wellman and Wellman 1992). Twenty-nine people were interviewed, with a combined total of 3,335 active ties in their personal networks. The interview participants are a subset of the random sample of adults surveyed in 1968 for the first East York study (Wellman 1979). Although most have hundreds of people in their social networks, constraints on time meant that we were only able to ask participants in detail about *active* network members, comprising *strong* network members (socially-close, intimate ties extending beyond the household), and *significant* network members who are active network members but not socially-close. For a more extended discussion of measurement and method, please see Plickert, Côté and Wellman 2007.

East York is in Toronto's urban heartland, about a half-hour's drive or transit trip from the central business districts of Toronto. At the time of our interviews, residents principally lived in small single-family homes, with some living in apartment buildings or larger homes (see Figure 1). The East Yorkers were predominantly British in ethnic origin, and working-class and middle-class. The interview participants ranged in age from 29 to 65 years old. Most (71 percent) were married. Ninety percent of the men held a full-or part-time job. Somewhat fewer women, 66 percent, were employed, 8 percent were not in the labor force and 26% were homemakers. Like the interview participants, the majority of network members were married (67 percent), employed (75 percent), and had attended at least trade school or some college (90 percent). They ranged between 18 and 90 years in age.

> **Figure 1 about here: Picture of East York** <

The Resources That East Yorkers Exchange

We asked the East Yorkers about which of twelve different kinds of resources they received from – or gave to – each active network member. Our previous NetLab research has found that the great majority of ties between East Yorkers and network members provide some kind of support. We identified four broad kinds of social support – *emotional aid*, *minor services*, *major services*, and *financial aid* – and also discovered which types of ties were apt to send different kinds of support (see Wellman and Wortley 1989, 1990 for details).

¹² More *densely-knit* networks may also be more supportive, having the advantages of stability, reliability and consistency. (Durkheim 1897; Bott 1957; Thoits 1982; Fischer 1982b; Kadushin 1981, 2002; Marsden and Hurlbert 1988; Molm, Takahashi and Peterson 2000; Williams and Dillworth-Anderson 2002). Yet one widely-cited study has argued that more sparsely-knit networks are more heterogeneous, providing more connectivity to outside resources (Granovetter 1973). The data for one-way support do not support either hypothesis, as they do not show any substantial relationships between the density of networks and the support they provide (Wellman and Gulia 1999). Nor did preliminary analyses of reciprocity show any density effects. Hence, density was deleted from the final analysis.

Emotional Support is provided in one direction or another in 61 percent of the ties: 41 percent of network members provide East Yorkers with emotional support while 38 percent of East Yorkers' ties with network members are emotionally supportive. That 61 percent – and not 79 percent – of the ties are emotionally supportive is because some ties are reciprocally supportive: see Table 1 for details. In our study, emotional support includes support during minor upsets (provided by 47 percent of the network members), giving advice about family problems (39 percent), and support during major or long-lasting emotional crises (33 percent). The widely-given emotional aid is intangible, with little financial cost, and can be given to some extent over the telephone as well as face-to-face.

> **Table 1 about here: Number and Percent Providing One-Way and Reciprocal Support** <

Minor Services are also provided in one direction or another by 64 percent of ties. Forty-five percent of network members (24% 1-way + 21% reciprocally) and 40 percent of interview participants provide minor services. The minor services include giving or lending household items (38 percent), helping with small household jobs (35 percent), providing other minor services (40 percent), and help in dealing with organizations (10 percent). Thus tangible aid – goods and services – is widely given.

Major Services are provided in one direction or another in a far lower percentage of ties; 29 percent. They are provided by 16 percent of the network members and by interview participants in 17 percent of their ties. Major services include help with big household chores (such as repairs, regular help with housework; 16 percent) and other large services (such as day care for children or long-term health care; 7 percent). Providing such major services usually requires a major commitment of time, effort, and sometimes skill. Hence, major services are less likely to be reciprocated. Not only is the need rarer than for minor services and emotional support in predominantly working/middle-class East York, it is less likely that both respondent and network member both have the capacity to provide major services.

Financial Aid is provided in one direction or another by a lower percentage of ties: 16 percent. It is provided by 8 percent of the network members and by 6 percent of the interview participants. Only a tiny percentage (2 percent) of ties reciprocally exchange financial aid: 7 ties in all. We believe that this is because financial resources generally are fungible. Those who have substantial amounts of it do not need to exchange with others, except at much different times of their lives: for example, parents aid young adult children who may reciprocate many years later to their aged parents. Given exchanges of financial aid are indiscriminate, the proportional odds assumptions for our cumulative logit models do not hold. Consequently, we do not include financial aid in continuous analyses. However, our data do suggest that *reciprocal exchanges* of financial aid are most likely to occur between parents and adult children, in particular between fathers and adult daughters. Women neighbors of roughly similar ages also help each other financially.

The Extent to which East Yorkers Reciprocate

We use one-way exchange as an independent explanatory variable, from participant to network member. This allows us to examine the extent to which the participants' provision of resources is associated with reciprocal exchange.

Previous research using these data has shown how different kinds of relationships, networks and personal characteristics provide different types of resources. Analyses have shown that while East Yorkers do obtain resources from their networks, different types of resources are received from different network members. The type of relationship – the strength of ties, kin or friend, and physical accessibility are especially related to who provides emotional aid, minor services and major services.¹³

¹³ For more information, see Wellman 1985; Wellman, Carrington and Hall 1988; Wellman and Wortley 1990; Wellman and Gulia 1999; Wellman and Potter 1999; Wellman and Frank 2001.

The evidence shows that East Yorkers are supportive in many ways, and that they reciprocate support most fully in providing emotional support and minor services. The last row in Table 1 shows the extent to which network members giving one kind of resource receive the same kind of resource in return. Yet, even for the most prevalent types of support – emotional support and minor services – only about one-fifth of the ties reciprocate. However, reciprocity is contingent on one-way exchange, and when emotional support or minor services are given, it is reciprocated in a minority of the ties. Thirty percent of all emotional aid is reciprocally exchanged as are 38 percent of minor services.¹⁴

A smaller percentage of major services are given – and reciprocated.. Giving such services entails a greater commitment of time and effort, and only a minority of East Yorkers (29 percent) gives or gets major services. Most major services are not reciprocated: only 4 percent of all ties have relationships in which major services are reciprocated. Even in those ties when major services are given, only 14 percent of the giving relationships are reciprocated. Although the small number of reciprocating ties limits our analysis, the data suggest that either the need for major services has not been present or the receiver does not have the ability to reciprocate by providing major services in return.

Statistical Method

The logistic regressions used for our multivariate research describe the relationship between the reciprocity of each type of resource – Emotional Support, Minor Services and Major Services – with sets of explanatory variables discussed in the previous section: from tie strength to network size and density. There are three values for each of the three reciprocity variables that we study:

1. No support: no resource provided by either participant or network member.
2. One-way exchange: resource provision by participant to network member, but not in the other direction.
3. Reciprocal exchange: Two-way reciprocal resource provision between participant and network member.

The models we use describe the reciprocal exchanges of active network members. The explanatory variables predict the probability of being in a higher category (two-way exchanges) rather than in a lower category. Our cumulative logit models make no assumption about the distances between observed categories. It takes into account the proportional odds score, testing the assumption that the three-value ordinal restrictions are valid, with desired p-values. The proportional odds assumption evaluates the null hypothesis that the explanatory coefficients are equal.

Explaining Reciprocity: Our Results

Baseline Models: Measuring the Golden Rule

We use five models to study the reciprocal exchange of each of emotional support, minor services and major services. We first examine whether the provision of a supportive resource in one direction is associated with reciprocity. We do this in two ways: the specific (restricted) exchange of a resource (Model 1) and the mixed (generalized) exchange of one resource for another (Model 2). Subsequent models examine if tie and network characteristics (Model 3) and personal characteristics (Model 4) add to the explanations provided by the Golden Rule.

¹⁴ We calculated the reciprocal exchange of emotional support in the following manner: First, as Table 2 shows, 61 percent of the ties have an emotional support component ($100 - 39 = 61$). Dividing the percentage of reciprocating ties (18 percent) by this number – $18/61$ – shows that 30 percent of all ties that contain emotional support reciprocate it.

Our operational definition of reciprocity is that the interviewed East Yorker has given a resource (for example, emotional support, etc.) to a network member *and* that the network member has given that (or another) resource to the East Yorker. However, we do not have systematic information about in which direction the support was given first. In many cases, it is an ongoing dance of reciprocal exchange.

The first model straightforwardly supports a narrow construction of the Golden Rule: East Yorkers are significantly likely to do unto their network members as their network members have done onto them (the main diagonal of Table 2). Put another way, there are significant associations between the giving and receiving of emotional support, the giving and receiving of minor services, and the giving and receiving of major services. This does not mean that all who get a resource give it in return, but they are more likely to do so than those who never got the resource. All three statistical associations are significant and large, with minor services having a somewhat stronger association than emotional support: odds ratios of 7.5 and 5.4 respectively. (We repeat our caution that the small number of reciprocated cases of major services makes its statistics problematic, beyond basic percentages.)

> Table 2 about here: Patterns of Resource Exchange <

The only other Golden Rule phenomenon exists in two cases; between emotional support and major services and between minor services and emotional support. Participants who have given emotional support to network members have received major services from them and participants who helped a network member with a minor service received emotional support from them. However, we do not know which came first: for example, the hug or the care-giving.

Although importantly supporting the Golden Rule, the analysis based on Table 2 looks at reciprocal exchange only in isolation from other potential explanatory variables. Hence, we performed fuller logistic regression models that include the potential explanatory variables discussed earlier (tie strength, etc.) Tables 4, 5 and 6 present these for emotional support, minor services and major services respectively. Although they contain many variables, they are the pared-down result of many logistic regressions. For example, because kinship and network density are statistically associated, we ignore network density as an explanatory variable and use a number of kinship measures. Similarly, preliminary analysis led us to retain a variable indicating whether a network member was a neighbour or not and to delete a measure of residential distance between network members and participants.¹⁵ Although we include Table 5 for major services, we do not discuss it extensively because the low percentage of ties providing major services makes statistical analyses problematic.

> Tables 3, 4 and 5 about here: Logistic regressions <

Model 1 in the three tables is the baseline model, examining the narrow, specific exchange, definition of the Golden Rule (tit-for-it). The statistics for this model repeat those found in Table 2 above: giving emotional support, minor services or major services in one direction strongly increase the odds of receiving it in the other direction.

Model 2 examines the generalized Golden Rule, including tit-for-tat as well as tit-for-tit. The generalized Golden Rule show some expansion from the specific exchanges documented in Model 1. Participants significantly give emotional support and get major services, and there is also a weak association between giving minor services and getting emotional support.

Taken together, the two Golden Rule models show that most exchanges are for similar resources, such as minor services for minor services. However, all of the other associations for resource exchange are positive, suggesting that there are additional tendencies towards generalized exchanges. Hypothesis 1 is clearly confirmed (specific exchanges), and there is some support for Hypothesis 2 (generalized exchanges). Not only are a few generalized exchanges statistically significant, but the goodness of fit

¹⁵ As residential proximity is strongly associated with neighbouring, we could not leave both in these models. We kept neighbouring after preliminary analyses showed it to be more important for understanding reciprocity.

increases from Model 1 to Model 2: the logistic likelihood statistic ($-2 \text{ Log Likelihood}$) decreases in each of Tables 3, 4 and 5.

Relationships and Reciprocity

Is it just support bringing forth reciprocal support, or are there other influences on when the Golden Rule is observed? To address this issue, we start by adding to the baseline models measures of other aspects of the ties between participants and network members. **Model 3** adds measures of tie strength, frequency of contact, and indicators of role relationships: parent/adult child, sibling, friend, and neighbour.

We were astonished when first looking at the statistical tables to find that tie characteristics add little to the Golden Rule items in explaining the likelihood of getting reciprocal resources. (The Golden Rule items of specific and generalized reciprocity continue to remain significant in these two models.) There are no significant tie characteristics related to the reciprocal exchange of emotional support in Model 3. However, in addition to the Golden Rule, being a neighbour, a friend, a parent or an adult child is associated with reciprocally receiving minor services, while being a neighbour, a parent or an adult child is associated with reciprocally receiving major services. Tie strength has no impact, nor does frequency of contact – either face-to-face or by phone – or being a friend or a sibling. In short, there is no support for Hypothesis 3 (tie strength), and only partial support for Hypothesis 4 (the parent-child kinship relationship) and Hypothesis 5 (neighbouring).

The strongest positive relationship for the parent-adult child relationship is an adjusted odds ratio of 10.0 for the exchange of major services. This means that the odds of a parent and adult child exchanging major aid is more than ten times the odds for other role relationships.¹⁶ As only a small number of all ties exchange major services, these odds are not reliable, but they do suggest that parent-child relationships dominate this type of exchange, and not close friends or other kinfolk.

The low number of associations between tie characteristics and reciprocity has surprised us because these same data have shown many tie characteristics to be appreciably related to the *one-way* provision of supportive resources (see above; see also Wellman and Wortley 1990). We found an association then, why not now? We believe that we have stumbled onto a chain of causality that is more complex than we had originally imagined. Tie strength, frequent contact, and role relationships affect the one-way provision of resources, but once these resources have been received, it is the sheer fact of getting them that engenders reciprocity, both specific and generalized.

Personal Characteristics, Network Characteristics and Reciprocity

Do the personal characteristics of interview participants and their network members affect reciprocity in addition to – or even instead of – the Golden Rule and tie characteristics? **Model 4** is our final model. It is the best fitting model for all types of reciprocity, as shown by the lower $-2 \text{ Log Likelihood}$ statistic in Tables 3, 4 and 5. This is especially apparent for emotional support (Table 3): the 11 percent decrease in this statistic from 518 to 462 shows how the personal characteristics of sex and age help to explain the likelihood of reciprocating emotional support.

Once again, the Golden Rule measures remain strong and significant in Model 4, but there is an additional effect of two social characteristics: gender and age. Recall that our one-way analysis of social support (Wellman and Wortley 1990) had found that women are more emotionally supportive. Model 4 shows that women also significantly reciprocate emotional support. Hence, Hypothesis 6 is supported. The age of network members and participants also affects the likelihood of reciprocal exchange. The majority of effects are positive, showing support for hypothesis 7. The age of network members positively impacts the likelihood of exchange of emotional support while only the age of the participant has a

¹⁶ We also have a large odds ratio for neighbours reciprocating major services. However, only two neighbours reciprocally exchange major services.

similar effect. There is also a slightly negative effect of network members' age on reciprocated minor services. Network members who are younger are also more likely to exchange minor services than members who are older.

Measures of the similarity of personal characteristics were removed from Model 4 when preliminary analyses did not show any relationship between them and any form of reciprocity. The lack of importance of similarity suggests that the reciprocal exchange of resources is not based on "sameness" but on resources previously supplied. The implication is positive for societal cohesion that cuts across boundaries of class, gender, ethnicity, etc. Prior supportiveness fosters the bond of reciprocity and not class, gender or marital status.

Model 5 also includes network size, the only network characteristic retained for the final logistic regressions. The larger the network, the more likely each tie in the network is to provide emotional support reciprocally. Having more people in a network increases the chances for reciprocal exchanges. The quantity of ties implies the emotional quality of ties, rather than quality compensating for quantity. Hypothesis 8 is supported for emotional support and almost significantly for the reciprocation of minor services. However, major services depend solely on prior supportiveness and on the parent-child bond.

Summary and Conclusions: Support Leads to Reciprocal Support

Summarizing the Evidence on Reciprocity for East Yorkers

Our evidence is clear: the principal cause of reciprocity is giving support. Analyses show that getting support from network members is the key to East Yorkers reciprocating – usually in kind but sometimes with other forms of support (Figure 2). The parent-child bond, providing minor and major services, is the only relationship that appears to operate without much regard to near-term reciprocity.

> Figure 2a, b, c about here: Pathways of support and reciprocity <

Our findings suggest that tie characteristics, such as tie strength and the frequency of contact between participants and their network members, are important for initial giving of support. They set the exchange in motion, with the Golden Rule coming into play thereafter.

The practice of reciprocity is especially important for the exchange of resources that supply minor services and emotional support. Each exchange strengthens the bond and makes further exchanges more likely. Our reading of the interviews suggests that both self-interest and norms are at work here.

The exception is the provision of major services where there is little evidence of reciprocity, because the necessarily large expenditures of time and money mean that return engagements are difficult for the recipients of such major aid. Perhaps our time frame was too short in the interviews. This is probable when the most common supply of major services is between parents and their adult children. It is a long time between parental help to children and filial help to aged parents. Given that other kin are less supportive and that most ties operate independently of each other, we believe that the parent-child norm of mutual support has continued in East York even while other kinship norms have weakened.

Even though personal networks stretch well beyond neighbourhoods in the 1970s as now, neighbouring still has its supportive pay-offs (Mok and Wellman 2007). Yet, neighbours are only a small fraction of the East Yorkers' networks. The phone takes much of the place of neighbourly interaction, supplemented by intermittent trips by car or plane to visit with far-flung network members (Wellman and Tindall 1993). The internet and instant messaging – currently being joined by webcams and digital-network telephones – probably have reduced the importance of physical proximity (Wellman 2001; Wellman and Haythornthwaite 2002). Nevertheless, the importance of proximity will persist for services until it is possible to transport a cup of sugar electronically.

Conclusions and Implications

What do our findings mean for reciprocity? First, as the sages counseled, invest in your ties. Amass generalized credit that can be called upon for reciprocal exchange in the future (Kadushin 1981). As the action philosopher Don Corleone said via the voice of Marlon Brando:

Some day, and that day may never come; I'll call upon you to do a service for me. But until that day – accept this justice as a gift on my daughter's wedding day (Puzo and Coppola 1972).

Second, for reciprocity in East York – and probably most of North America – it is not who your network members are, but what their relationships are to you. Gender, socioeconomic status, and other personal characteristics do not substantially affect reciprocity. The nature of relationships do, through the strength of ties, the accessibility of network members, and their role relationships as kin and friends.

Third, do unto others as you would have them similarly do unto you. The evidence shows that most reciprocity is tit-for-tit and not tit-for-tat: people get back the kinds of resources they give. Although the reasons for this are beyond the scope of this chapter, we suspect that it is not so much careful bookkeeping but the specialization of relationships: ties that specialize in emotional aid often do not specialize in material aid (Wellman and Wortley 1989, 1990). Hence, people respond in kind.

Fourth, it is probably for similar reasons of specialization that the key to supportiveness among our respondents is the nature of their ties and not the nature of their networks. Moreover, the prevalence of sparsely-knit networks in North America – rather than solidary groups – suggests that the ties themselves are more important than the network (Wellman 2001; Wellman and Frank 2001), as we see with only a small effect for network size.

We close by noting some scope conditions to what we have described. These data are not from the era of the internet: the greater ease of communication now may have engendered increased supportiveness, especially in intangible exchanges. We also wonder if the decline in the past twenty years of people available to discuss important matters (Smith-Lovin, McPherson and Brashears 2006) is manifest in a reduced availability of support (reciprocal or not) in contemporary North America.

The supportive exchanges we have analyzed focus on reproduction rather than on production. In the 1970s, East Yorkers rarely discussed using their relationships to go into business, invest, or even to get a job. They discussed relationships and exchange that centered on themselves and their households, and secondarily on their networks and the neighbourhoods. The East Yorkers' investments in their ties have provided *havens*: a sense of belonging and being helped. When needed, the ties have provided *bandages*: routine emotional aid and small services that help people cope with the stresses and strains of their everyday lives. More rarely, a few ties have provided *safety nets* that have lessened the effects of acute crises and chronic difficulties such as serious illness, childcare and unemployment.

The sages got the reciprocity norm right: As Bakunin said:

No person can recognize or realize his or her own humanity except by recognizing it in others and so cooperating for its realization by each and all.

Or, perhaps, reciprocity is a more hard-bitten, utilitarian set of accounting, as “Matron Mama Morton” sang in the musical, *Chicago* (Kander and Ebb, 1975):

*They say that life is tit for tat, And that's the way I live
So, I deserve a lot of tat, For what I've got to give
Don't you know that this hand, Washes that one too
When you're good to Mama, Mama's good to you!*

An Elaborated Typology

Although our work distinguishes between generalized and restricted reciprocity, it incorporates many elements at once and lacks nuance. Our research and review of the literature suggest the usefulness of more elaboration of the concepts of restricted and generalized reciprocity. For one thing, the categorical distinction between restricted and generalized exchange may be better reconceptualized as two ends of a continuum (Uehara 1990). We propose a typology that adds three factors important in an exchange: the tie or network basis of the relationship, the nature of the resources exchanged, and the time to reciprocity.¹⁷ These incorporate all of the elements of restricted and generalizable exchange but break them apart so that further conditions can be explored.

Network similar exchanges work on the same principle as the dyadic exchanges analyzed in this paper, but they occur within a social network rather than a one-to-one tie. If trust exists within a social network, a third person may reciprocate with support instead of the initial recipient (Ekeh 1974; Kadushin 1981). This implies belief in the reciprocating nature of the network, or – if the Golden Rule is accepted – in humanity as a whole (Yamagishi and Yamagishi 1994; Cook 2004). A third (or fourth) party instead of the person who received the resource reciprocates the resource given. Malinowski's (1920) study of the "Kula ring" demonstrates this form of exchange, where people passed ornamental armbands and necklaces around from person to person, through a chain of Pacific islands.

One-to-one mixed exchanges occur between two people, but the resource returned to the original receiver may not be the same as the one that was originally given. One person may help another with building a garage, to have the other reciprocate with a bottle of wine as repayment. *Network mixed exchanges* are series of one-way exchanges that occur within a network or chain of people, where again the resources exchanged are not the same. This can become series of one-way exchanges within a network or exist as reciprocated exchanges that occur fluidly between many individuals. For example, during the Communist era, Hungarians kept careful accounts of who had helped whom with various aspects of house construction: laying brick, doing the wiring, etc. These often became complex networks of exchange (Sik and Wellman 1999).

The third factor is time to reciprocity. Ekeh (1974) suggests that restricted exchanges are characterized by reciprocation that takes place in a shortened time frame, where the resource is reciprocated in kind. This can create conditions for future exchanges. Generalized exchanges have fewer restrictions and are indicators of interpersonal trust where immediate reciprocation of resources is not required (Gouldner 1960).

Within the four types of exchange generated by cross-tabulating types of relationships and types of resources, reciprocation can take place immediately or within an agreed time frame. The conditions of repayment can also be relaxed, with reciprocation occurring in the future but with no specified deadline.

Further work needs to be done to assess this more elaborated typology. For example, we believe that a difference exists with reciprocal exchanges between pairs and within larger network-based systems of exchange. Reciprocity at the network level requires a look at the types of relationships that are more likely to participate as well as the types of support that are more likely to be exchanged within a network. How does the composition of the network (e.g., the percentage who are kin) and the structure (e.g., density of interactions) affect reciprocity. Although we did not find any effect of network density and only a weak effect of network size in our own research, this may be because we looked only at support and reciprocity among strong ties. Would network effects be more pronounced among weaker ties which might be encouraged by the social environment to be reciprocally supportive?

Finally, longitudinal research could investigate which usually comes first: support and reciprocity or friendship and strong ties? We have assumed in our analysis that strong ties are more apt to reciprocate.

¹⁷ This is not an exhaustive list. For example, another variable is the recipient of reciprocation; either an individual or the group (Yamagishi and Cook 1993).

While our assumption was not confirmed, we caution that we looked only at a dozen or so strongest ties in networks that usually contain hundreds. It is quite possible that different dynamics affect support and reciprocity among weaker ties. And do such ties go stronger with reciprocal exchanges in a network filled with such exchanges? Would Cain have been his brother's keeper if he had lived in a nurturing village.

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Table 1. Percentage of Network Members Providing Support to Participants

Network Member	Emotional Support	Minor Services	Major Services	Financial Aid
	%	%	%	%
No Exchange	39	36	71	84
One-Way Exchange				
Network Member to Participant	23	24	12	8
Participant to Network Member	20	19	13	6
Reciprocal Exchange	18	21	4	2
Total	100%	100%	100%	100%
% One-Way Exchanges	30%	33%	14%	12%
That are Reciprocated <i>[calculated as % Reciprocal Exchange / (100 – % No Exchange)]</i>				
Number of Ties = 335				

Table 2. Reciprocal Pattern of Resource Exchange Between Network Members and Participants

Participants' Support	Emotional Support		Minor Services		Major Services	
	<i>b (s.e)</i>	<i>Odds</i>	<i>b (s.e)</i>	<i>Odds</i>	<i>b (s.e)</i>	<i>Odds</i>
Network Members' Support						
Emotional Support	1.70 ^{****} (.16)	5.4	0.27 (.14)	1.3	0.87 ^{***} (.24)	2.4
Minor Services	0.37 [*] (.15)	1.4	2.02 ^{****} (.18)	7.5	0.43 (.26)	1.5
Major Services	0.17 (.25)	1.2	0.02 (.24)	1.0	1.91 ^{****} (.27)	6.7
Likelihood Ratio		191.26		222.79		111.63
N		335		335		335

* p<.05 ** p<.01 *** p<.001 **** p<.0001

Table 3. Summary of Cumulative Logit Analysis for Reciprocal Emotional Support of Network Members

		Model 1		Model 2		Model 3		Model 4	
		b (s.e)	Odds	b (s.e)	Odds	b (s.e)	Odds	b (s.e)	Odds
<i>Participant's Services</i>	Emotional Support	1.85*** (.16)	6.38	1.70*** (.16)	5.38	1.68*** (.16)	5.38	1.58*** (.17)	4.84
	Minor Services			0.37* (.15)	1.45	0.42** (.16)	1.53	0.55** (.17)	1.73
	Major Services			0.17 (.25)	1.19	0.04 (.27)	1.05	-0.05 (.29)	0.95
<i>Relational Attributes</i>	Tie Strength (strong ties=1)					0.01 (.28)	1.01	0.43 (.31)	1.54
	Freq. of Phone Contact					0.01 (.20)	1.01	0.03 (.23)	1.03
	Freq. of Face to Face Contact					-0.12 (.23)	0.88	0.07 (.26)	1.07
<i>Network Member's Role Relationship</i>	Parent/Adult Child					0.81 (.53)	2.24	0.65 (.60)	1.91
	Siblings					0.37 (.38)	1.45	0.74 (.41)	2.10
	Friend					0.33 (.37)	1.39	0.61 (.39)	1.83
	Neighbour					-0.31 (.39)	0.74	-0.56 (.43)	0.56
<i>Network Member's Personal Characteristics</i>	Sex (Female = 1)							0.86** (.31)	2.37
	Marital Status (married = 1)							0.36 (.29)	1.44
	Age							0.03** (.01)	1.03
<i>Participant's Personal Characteristics</i>	Sex (Female = 1)							0.22 (.34)	1.24
	Marital Status (married = 1)							-0.01 (.33)	0.98
	Age							0.02 (.02)	0.91
<i>Size of Network</i>	Netsize							0.09*** (.03)	1.01
- 2 Log L			535.4		526.5		518.0		462.0
N			335		335		335		335

† p < .10; * p < .05; ** p < .01; *** p < .001.

Table 4. Summary of Cumulative Logit Analysis for Reciprocal Minor Services of Network Members

		Model 1		Model 2		Model 3		Model 4	
		b (s.e)	Odds	b (s.e)	Odds	b (s.e)	Odds	b (s.e)	Odds
<i>Participant's Minor Services</i>	Emotional Support			0.27 (.14)	1.30	0.28 (.15)	1.33	0.28 (.16)	1.33
	Minor Services	2.12*** (.17)	8.32	2.02*** (.18)	7.52	1.94*** (.18)	7.00	2.04*** (.20)	7.67
	Major Services			0.02 (.24)	1.02	-0.03 (.26)	0.97	-0.05 (.27)	0.94
<i>Relational Attributes</i>	Tie Strength (strong ties=1)					-0.00 (.29)	0.99	0.04 (.31)	1.05
	Freq. of Phone Contact					-0.09 (.21)	0.91	-0.01 (.22)	0.98
	Freq. of Face to Face Contact					0.12 (.24)	1.23	0.06 (.25)	1.06
<i>Network Member's Role Relationship</i>	Parent/Adult Child					1.08* (.54)	2.97	1.75** (.60)	5.80
	Siblings					0.28 (.40)	1.33	0.31 (.43)	1.36
	Friend					0.92* (.37)	2.52	0.93* (.41)	2.53
	Neighbour					1.20** (.40)	3.32	1.22** (.43)	3.42
<i>Network Member's Personal Characteristics</i>	Sex (Female = 1)							-0.51 (.30)	0.59
	Marital Status (married = 1)							0.05 (.29)	1.04
	Age							-0.03** (.01)	0.97
<i>Participant's Personal Characteristics</i>	Sex (Female = 1)							0.38 (.33)	1.46
	Marital Status (married = 1)							0.39 (.33)	1.47
	Age							0.02*** (.02)	1.02
<i>Size of Network</i>	Netsize							0.04† (.02)	1.05
- 2 Log L			501.4		498.0		482.2		465.2
N			335		335		335		335

† p < .10; * p < .05; ** p < .01; *** p < .001.

Table 5. Summary of Cumulative Logit Analysis for Reciprocal Major Services of Network Members

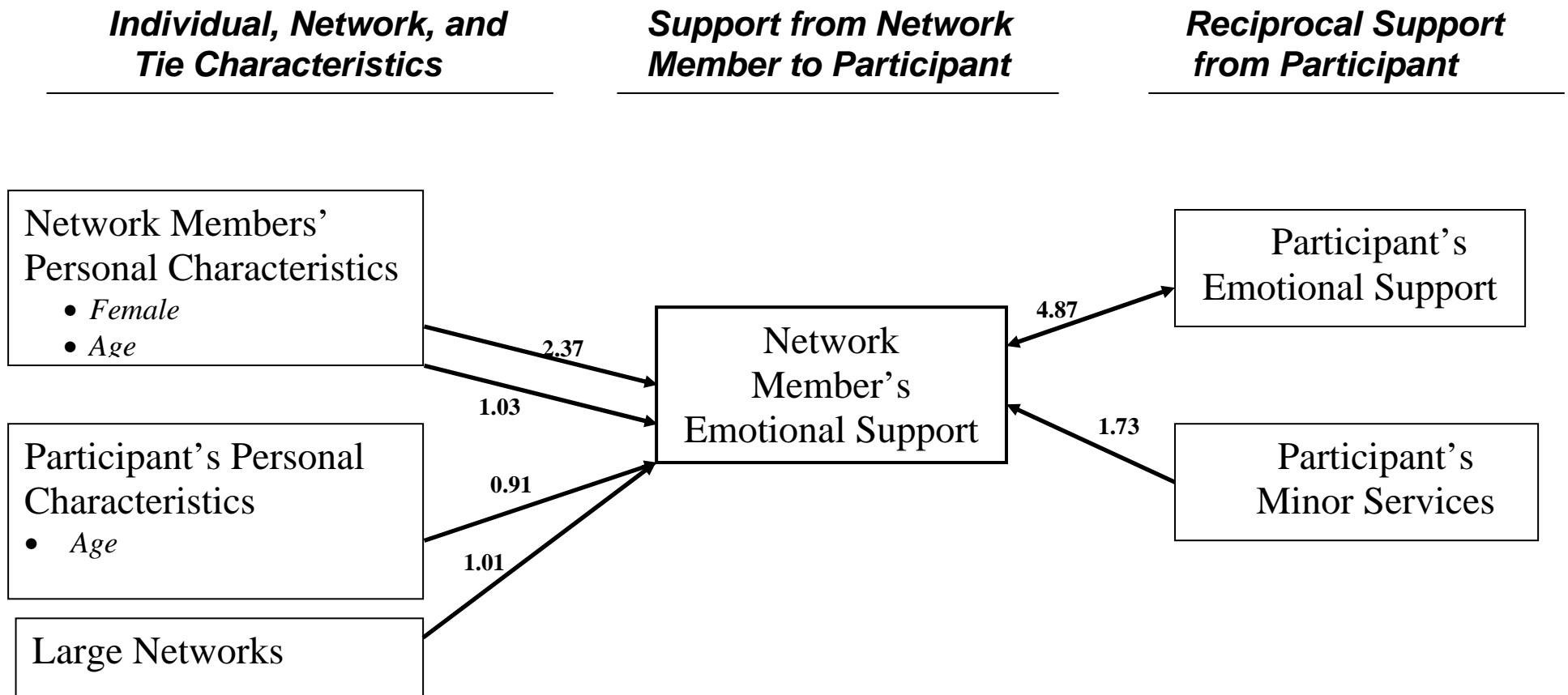
		Model 1		Model 2		Model 3		Model 4	
		b (s.e)	Odds	b (s.e)	Odds	b (s.e)	Odds	b (s.e)	Odds
<i>Participant's Services</i>	Emotional Support			0.87*** (.24)	2.40	0.91** (.26)	2.48	0.97*** (.29)	2.65
	Minor Services			0.43 (.26)	1.54	0.21 (.29)	1.23	0.22 (.29)	1.24
	Major Services	2.32*** (.26)	10.21	1.91*** (.27)	6.78	1.95*** (.31)	7.00	1.97*** (.32)	7.22
<i>Relational Attributes</i>	Tie Strength (strong ties=1)					0.17 (.42)	1.19	0.16 (.44)	1.17
	Freq. of Phone Contact					-0.02 (.30)	0.98	-0.01 (.31)	0.99
	Freq. of Face to Face Contact					-0.32 (.38)	0.72	-0.42 (.40)	0.66
<i>Network Member's Role Relationship</i>	Parent/Adult Child					2.30* (1.13)	10.00	2.52* (1.18)	12.40
	Siblings					1.62 (1.12)	5.05	1.61 (1.12)	5.00
	Friend					1.68 (1.12)	5.40	1.70 (1.12)	5.51
	Neighbour					2.68* (1.10)	14.70	2.83* (1.12)	16.90
<i>Network Member's Personal Characteristics</i>	Sex (Female = 1)							-0.90 (.44)	0.41
	Marital Status (married = 1)							0.01 (.43)	1.01
	Age							-0.01 (.02)	0.99
<i>Participant's Personal Characteristics</i>	Sex (Female = 1)							0.29 (.48)	1.34
	Marital Status (married = 1)							0.66 (.59)	1.95
	Age							0.02 (.02)	1.02
<i>Size of Network</i>	Netsize							0.03 (.04)	1.03
- 2 Log L		271.1		250.0		238.6		231.3	
N		335		335		335		335	

† p < .10; * p < .05; ** p < .01; *** p < .001.

Figure 1: East York Houses & High Rises

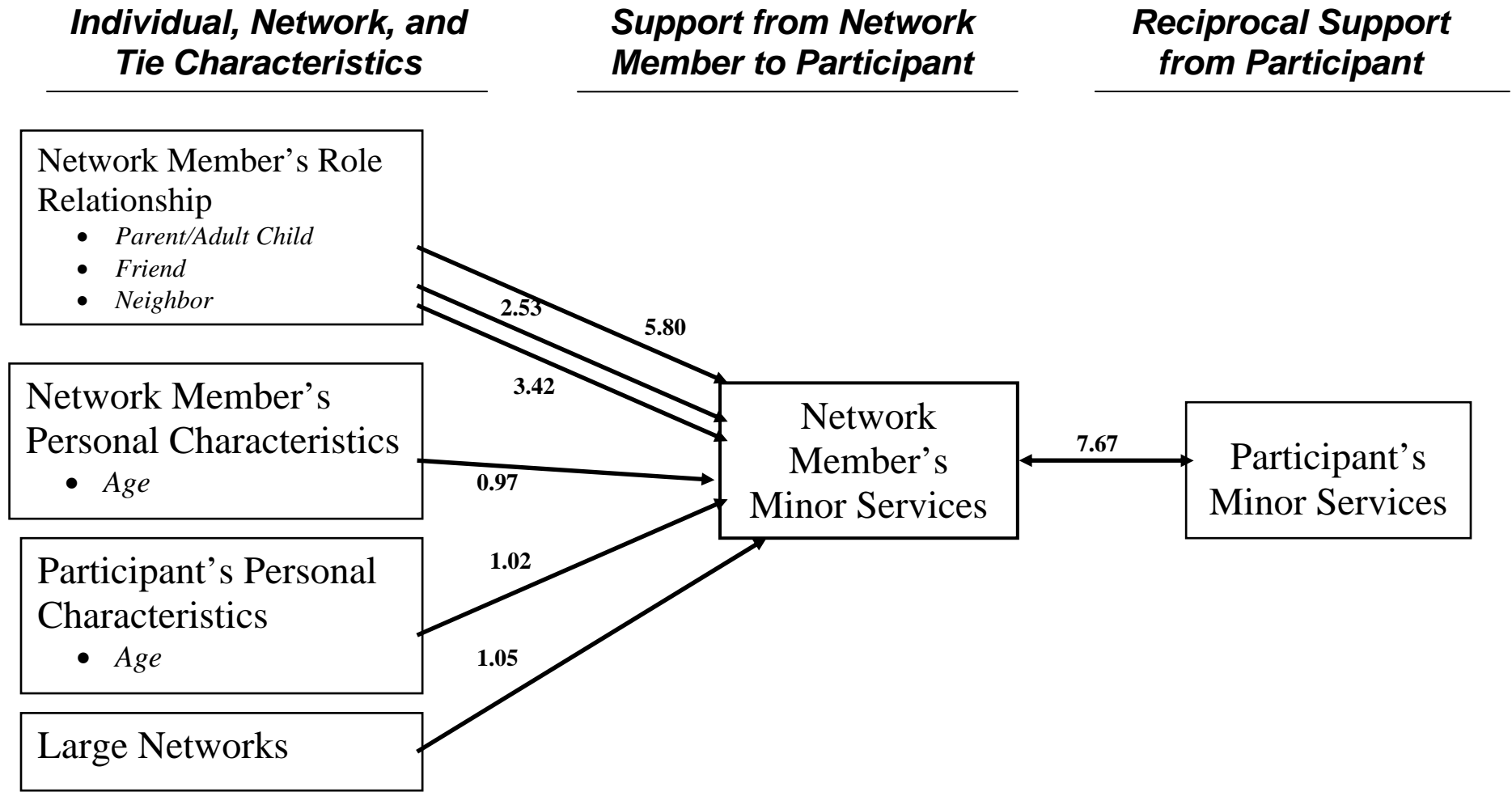


Figure 2a: Pathways to Reciprocated Emotional Support



Note: Pathway values depict odds ratios

Figure 2b: Pathways to Reciprocated Minor Services



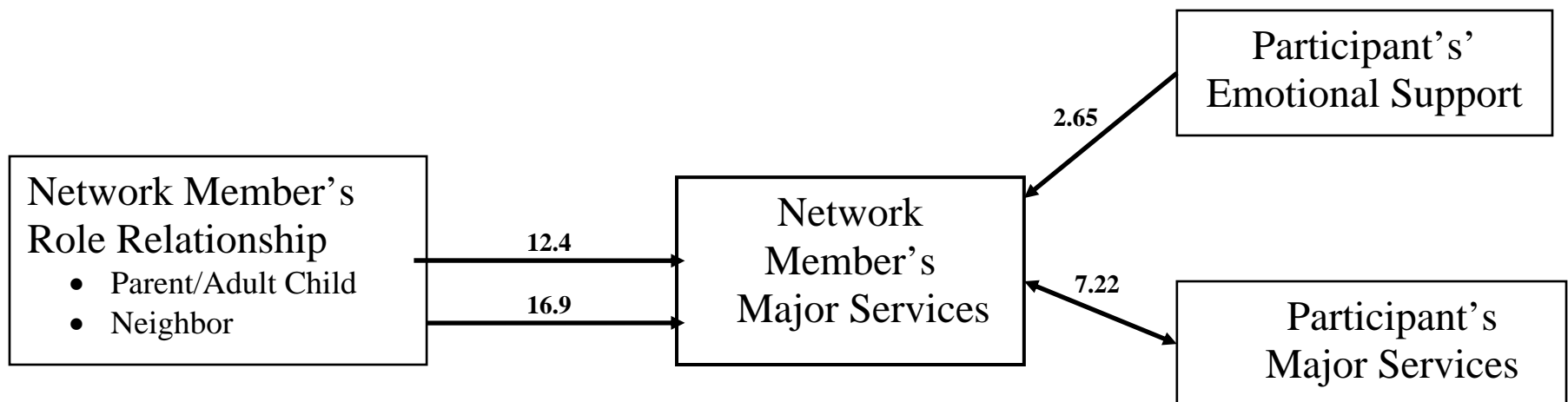
Note: Pathway values depict odds ratios

Figure 2c: Pathways to Reciprocated Major Services

*Individual, Network,
and Tie Characteristics*

*Support from Network
Member to Participant*

*Reciprocal Support
from Participant*



Note: Pathway values depict odds ratios