This paper discusses the development of convoy relationships in early childhood and reviews research on the processes responsible for continuity and change in convoy relationships from early childhood through late adolescence. Convoy relationships are thought to develop from a core of early attachment relations that provide initial support to the child and foster expectations regarding future support. Research that focuses on age-related differences in convoy composition and function suggests that preschoolers tend to nominate close family members in their convoy networks, except when asked directly about their friends. Younger school-age children included mostly close family members, while in middle childhood the networks were significantly larger, primarily because of the addition of extended family members. Adolescents reported significant increases in the amount of support received from friends across the high school and college transition, with friend support exceeding family support at the college level. (Contains 19 references.) (MDM)
Convoy relationships are thought to develop from a core of early attachment relations that provide initial support to the child and foster expectations regarding future support (Kahn & Antonucci, 1980; Levitt, Coffman, Guacci-Franco, & Loveless, 1994). In our research, we have explored the development of the social convoy with two aims in mind. First, we have sought to describe a normative path of convoy development from early childhood to late adolescence. Second, we have tried to understand the processes responsible for continuity and change in the convoy. We want to give you an overview of our approach to these problems and of our findings relative to these aims. Then we want to talk about potential avenues for further research based on the convoy model.

Convoy Development: Normative Patterns

In our attempts to map the development of the social convoy, we have focused on age-related differences in convoy composition and function; that is, we have been concerned with what specific relations are included in the convoy at different ages and with how much and what types of support are provided by those relations. We have conducted studies with preschoolers, school-age children, and adolescents. Some variation of the standard hierarchical convoy...
mapping procedure was used in all but the preschool studies.

In extensive pilot work with preschool children, Nathalie Franco (Guacci & Levitt, 1992) determined that 4-year-old children were not able to arrange their relations hierarchically, but they were able to nominate network members in response to the probes, "Tell me all the people who love you," "All the people who live in your house with you," and "who are your best friends." A label for each designated network member was then placed on an age and gender appropriate line drawing and the drawings were placed in front of the child. (We are indebted to Keiko Takahashi (1990) for allowing us to borrow her support figure drawings for this purpose). We have an example of a typical preschool network in this figure.

FIGURE 1 -- PRESCHOOL CHILD NETWORK EXAMPLE

The children were then asked to point to each person who performed each of 5 support functions; that is, we asked, "Who plays fun games with you?" "Who takes care of you when you are sick?" "Who makes you feel better when you are sad?" "Who makes you feel happy?" and "When you don't know how to do something, who shows you how to do it?"

In this study, as in other research based on the Convoy Model, we wanted to elicit what Furman (1984) calls an "insider perspective" on the child's social relationships. Both attachment and social support researchers have noted that personal well-being is based on the belief that one is loved and supported. Thus, in our view, the relations that are the most functional for the individual are those who are perceived by the individual to be close and important. However, as social network research with preschoolers has more typically used maternal reports, we wanted to know how data obtained from the child's perspective would compare with information obtained from mothers, who completed a standard convoy map with respect to their children's networks.
The children nominated primarily close family members (mothers, fathers, siblings, and grandparents) in their networks, except when asked directly about their friends. Consistent with convoy research in general, they received most of their support from close family, although friends were nominated frequently as persons who play fun games. With the exception of friends, persons designated by the child were also likely to be nominated by the mother, but mothers included far more people in the child's network than were nominated by the child. The extra persons included by the mother tended to be extended family members (aunts, uncles, cousins, etc.). We do not think this reflects inaccuracy on the part of the child as much as a tendency of mothers to overestimate the importance of these relations to the child. First, the child measures showed very good test-retest reliabilities (with intraclass correlations ranging from .62 to .80 [M = .72]) and correlations of the child measures with sociometric and teacher-preference ratings were stronger than were those obtained from the mother. Secondly, we could account for the child-mother discrepancy with frequency of contact information provided by the mothers. Persons nominated by the mother who were not included by the child had significantly less contact with the child (M = 3.23, SD = 0.83) compared to those whom the child did include in the network (M = 4.54, SD = 0.46), t (55) = 10.69, p < .0001. Thus, the preschool measure appears to have reliability and validity as a self-report index of social network composition and function for this age group.

For our work with school-age children and adolescents, we developed a modified version of the standard convoy mapping interview (Antonucci, 1986). The modifications included the use of circular stickers to represent network members within the concentric circle diagram and some simplification of the language. For example, we used the standard probes asking for hierarchical
placement of persons according to "closeness and importance," but we added, "people you really
love or like and people who really love or like you." This next figure illustrates a typical network
generated with the children's convoy mapping procedure

FIGURE 2 -- CHILD CONVOY MAP
Support function questions were comparable to those used with adults and tapped the
domains of affect, affirmation, and aid specified by the model. As you can see in the next figure,
functions included being a confidant, providing reassurance, sick care, help with school work, and
companionship, and enhancing self worth

FIGURE 3 -- CHILD CONVOY SUPPORT FUNCTIONS
Structural measures derived from the procedure include the overall number of persons in
the network, the number in each circle, and the number in each of several relationship categories,
including close family members, extended family members, and friends. Functional measures
include the amount of support from persons in the network as a whole, in each circle, and in each
relationship category. These measures have shown very good to excellent test-retest reliability
(Levitt, Guacci-Franco, & Levitt, 1993) and have been found to relate in predictable ways to
indices of well-being. For example, the amount of support received from persons in the inner
circle of the convoy was related to the child's self concept ($r = .24, p < .001$). (In contrast,
support from specific close family, extended family, and friend provider categories was not
correlated significantly with self-concept) (Levitt et al. 1993).

We used the modified mapping procedure with 7-, 10-, and 14-year-olds from Anglo,
African, and Hispanic-American populations in the South Florida area. As these findings have
been published, I will just review them briefly in the context of our other research. Consistent
with the preschool study, the youngest children included mostly close family members (parents,
grandparents, and siblings). In middle childhood, the convoys were significantly larger, primarily because of the addition of extended family members. The number of friends in the convoy increased markedly between middle childhood and early adolescence, replicating previous findings indicating that friends become a primary source of support in adolescence (Furman & Buhrmester, 1992). The number of close family members, extended family members and friends at each age level is illustrated in the next figure.

**FIGURE 4 -- N BY RELATIONSHIP CATEGORY AT AGE 7, 10, 14**

The surprise finding here was the importance of extended family in the middle childhood networks. The findings were quite reliable, as they replicated a previous study conducted by our group (Ordoqui, 1989) and were consistent across all three ethnic groups. Patterns of support were similar, with close family support retaining its importance across age, extended family support emerging in middle childhood, and friend support gaining prominence at adolescence.

We have done two further studies related to the research I've outlined here. Nathalie Franco has been using the convoy model as a framework from which to assess linkages between family support, sociometric status, and friendship quality in middle childhood. Some of her results have been reported at this conference (Franco & Levitt, 1995) and others will be presented at APA in August (Franco, Levitt, & Volovelsky, 1995). An as yet unreported finding of immediate relevance is that both parental \( r = .19, p < .01 \) and extended family \( r = .20, p < .01 \) support were related significantly to the quality of children's friendships, further reinforcing the value of extended family in the networks of pre-adolescents.

Thus, our research adds to the seminal work of Bryant (1985), who also observed extended family involvement at this age with her neighborhood walk procedure. Although we
need much more study to understand the meaning of this phenomenon, we propose that extended
family relations serve as a socializing bridge between the nonreciprocal exchanges of young
children with their parents and the reciprocally supportive peer relationships of adolescence.

In another line of research, Marcia Silver has been exploring the convoys of late
adolescents, with a focus on the transition from high school to college. She also has presented
some findings from a cross-sectional sample of high school seniors and college sophomores at this
conference (Silver, 1995) and will present others at APA (Silver & Levitt, 1995). For this
symposium, however, we have taken a first look at two-year prospective findings for 79 students
who were followed across the transition. These students reported no changes in close family
support, but a significant increase in the amount of support received from friends across the high
school (M = 16.08, SD = 10.53) to college (M = 22.63, SD = 13.30) transition, t(77) = 4.33, p < .0001, with friend support exceeding family support (M = 14.84, SD = 9.21) at the college level t(78) = 4.41, p < .0001. Our research at both ends of the life span suggests that this period of
transition to adulthood may be a peak time for network instability and change.

These findings illustrate another basic premise of the convoy model; that is, that convoys
are most likely to change across major life transitions. Along with our descriptive work on the
development of social convoys across the life span, we have attempted to explore the processes
responsible for continuity and change in convoy relationships as a function of life transition

Processes of Continuity and Change

Following the work of Cairns (1977), we have proposed that convoy relations develop
through processes of familiarization and social responsiveness. These relations are then
maintained through expectations of support that remain relatively stable until they are challenged
by increased support needs accompanying life changes. Support expectations may arise through
direct experience with the members of one's convoy or as a function of life-stage related social
norms. They are thought to be influenced by personal maturation and by the residual effects of
past social encounters. When life events lead to a test of one's support expectations, failure on
the part of a convoy member to meet those expectations is likely to disturb the relationship. This
model of convoy relationship change is depicted in the next figure.

FIGURE 5 -- MODEL OF RELATIONSHIP CHANGE

Sherri Coffman and I have conducted initial tests of this model in research focused on
changes in maternal close relationships across the transition to childbirth. As we have reported
elsewhere (Coffman, Levitt, & Brown, 1994; Coffman, Levitt, Deets, & Quigley, 1991; Levitt et
al. 1994), changes in mothers' most important relationships were related to the extent to which
maternal support expectations were disconfirmed in the year after the infant's birth. Although our
results have been consistent with the proposed model, we have studied only one set of
expectations across one life transition. Thus, we need to address additional transitions to provide
a more complete test of the model.

There was an interesting side finding to these studies that we think has some general
relevance to the study of social relationships and social support. Several of our married mothers
ominated their own mothers, rather than their husbands, as the most significant person in their
etworks. Looking across research based on the convoy model, inner circle relations are primary
upport providers, but those in the inner circle are not always in expected relationship categories.
As another example, children in our studies typically place parents in the inner circle, but
occasionally they do not even include them in their networks. This raises an issue that we want to
pursue in further research based on the convoy model. Once we have established a normative pattern of development, we want to focus on the meaning of departures from this pattern, in hopes that we can identify children with seriously inadequate support systems. Following the work of other investigators regarding the sometimes problematic outcomes of involvement in peer networks (Cairns et al. 1988; Steinberg, Dornbusch, & Brown, 1992), we also want to identify instances when support networks may promote negative consequences.

New Directions

There are a number of other research avenues that ought to be pursued. Prospective analysis is needed to corroborate our cross-sectional findings and to identify transitional points in convoy development. The personal characteristics, situational forces, and processes associated with the evolution of the convoy need to be studied in greater depth. The conceptual and methodological advantages and limitations of the convoy model in relation to other developmental models of social relations need to be further articulated. We are also interested in learning whether variations in circle placement or in the reported supportiveness of convoy members have a counterpart in observable social interactions. At this point, we believe that the convoy model and associated methodology afford a means of describing with some precision the relationships that are important to the child at various points in development and the support provided by those relations. We are just beginning to explore the potential of the model to yield information of significance to the understanding of both normative and nonnormative paths of social development.
References


Preschool Social Network

Mom  Dad  Grandma  Grandpa  Nicole Sister
CHILD CONVOY
SUPPORT FUNCTION QUESTIONS

1. Are there people you talk to about things that are really important to you?

2. Are there people who make you feel better when something bothers you or you are not sure about something?

3. Are there people who would take care of you if you were sick?

4. Are there people who help you with homework or other work that you do for school?

5. Are there people who like to be with you and do fun things with you?

6. Are there people who make you feel special or good about yourself?
Support Expectations Model

Expectations Tested

Past Interactions with Relationship Partner(s)

Social Cognitive Development

Social Norms (Life Stage Related)

Expectations Regarding Partner Support

Relationship Stability

Relationship Change Positive

Relationship Change Negative

Expectations Exceeded

Expectations Confirmed

Expectations Untested

Expectations Violated

Expectations Tested